Alberta Health

Primary Care Networks
Review

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1. Executive summary

A Primary Care Network (PCN) is a model that supports the delivery of team-based primary health care services. A PCN is a network of physicians and other health providers, such as nurses, dietitians and pharmacists, working together in partnership with Alberta Health Services (AHS) to provide primary health care to patients. PCNs are the most common model of primary health care organization in Alberta, with 80 per cent of family physicians registered in a PCN. They are envisioned to provide coordinated, team-based care, tailored to meet the varied health needs of their local communities.

PCNs aim to achieve the following five provincial objectives: [1]

1. Increasing the proportion of Albertans with ready access to primary health care;
2. Managing access to appropriate round-the-clock primary care services;
3. Increasing the emphasis on health promotion, disease and injury prevention, and care of patients with complex problems or chronic diseases;
4. Improving the co-ordination of primary care with hospital, long-term and specialty care, and;
5. Facilitating the greater use of multi-disciplinary teams in primary health care.

The first PCNs opened in 2005 and celebrated their 10th anniversary last year. As of February 2015, there are 42 PCNs across Alberta, serving 3.3 million of 4 million Albertans. Annual funding for the 42 PCNs in 2014/2015 was $205 million—this amount is distinct from physician compensation, which is funded separately. The government has invested more than $1 billion to date in PCNs.

As the first PCNs have reached their 10th anniversary, it is timely to examine the lessons learned and the value achieved to date. Since the early 2000s, much has changed in Alberta:

- It is increasingly understood that primary health care has an impact on service utilization in acute care and other sectors of the health system.[2]
- There are increasing expectations of the public around provincial equity in access, consistent availability of knowledgeable practitioners providing programs based on the needs of the community, and participation in local decisions.
- Experience in chronic disease prevention, management and aging emphasizes the importance of interdisciplinary care in primary health care, as well as appropriate linkages and utilization of specialists and diagnostic services.[3]
- Person-centred care cannot be ignored. Patients are not willing to be passive objects of the service delivery system; rather they are calling for greater participation in decision-making.[4]
- Formation of AHS occurred with the aim to better integrate all public sectors of the health system, standardize care, and balance resources to reduce disparities across the province.
- Alberta is one of the few provinces with a primary health care strategy. Alberta is also completing an associated action plan to guide practical implementation of the strategy.

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[1] Government of Alberta. (June 2008). *Primary Care Initiative Policy Manual*. Edmonton, AB: Government of Alberta.
[2] Caminal, J., Starfield, B., Sanchez, E., Casanova, C. & Morales, M. (2004). The role of primary care in preventing ambulatory care sensitive conditions. *European Journal of Public Health, 14*(3), 246-251.
[3] Barr, V.J., Robinson, S., Marin-Link, B., Underhill, L., Dotts, A., Ravensdale, D. & Slivaras, S. (2003). The expanded chronic care model: An integration of concepts and strategies from population health promotion and the chronic care model. *Hospital Quarterly, 7*(1), 73-82.
[4] Saltman, R. B. & Figueras, J. (ed). (1997). *European healthcare reform: Analysis of current strategies*. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0005/136670/e55787.pdf

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The PCN Review (the Review) was undertaken by Alberta Health as part of its internal oversight responsibility to ensure primary health care is being delivered in an effective manner. The Review involved an analysis of the financial practices and service delivery approaches of a sample of PCNs. The findings of the Review will inform ongoing work to improve the efficiency and effectiveness of primary health care service delivery in Alberta, in order to work toward the overall vision of Alberta's Primary Health Care Strategy for "Albertans to be as healthy as they can be."

A stratified sample of 13 PCNs (referred to as "the PCNs") was reviewed, including representation from urban, mid-sized rural and small-sized rural PCNs, as well as the PCN Program Management Office (PMO). The PMO is grant-funded by Alberta Health to the Alberta Medical Association (AMA) to provide operational and business support services to PCNs. The PMO provides resources to support PCNs in communications, evaluation and quality improvement, and business planning.

For the financial portion of the Review, data were collected from the 13 PCNs and the PMO to determine what is working well and where there is opportunity for improvement in financial management and accountability. Data collection methods included conducting staff interviews to understand PCN and PMO processes around finance and operations. Samples of expenditures for fiscal years 2013/2014 and 2014/2015 were also reviewed. To maintain the privacy of personal information that had to be viewed, 12 out of the 13 PCNs and the PMO received a site visit.

For the service portion of the Review, the data were collected through a combination of telephone interviews, open-ended surveys of each of the 13 PCNs, and analyses of business plans, annual reports, evaluation documents, websites and community profile information for the years 2013/2014 through 2014/2015. Comparative analysis across data sources was undertaken. Eight of the 13 PCNs and the PMO had in-person site visits to validate results through direct observation.

The Review began in July 2015 and ended in September 2015. The report was developed in October 2015 and revised in January 2016, upon receiving feedback from the PCN Physician Leads Executive, the AMA, and AHS on an initial draft.

Some limitations for interpretation and generalizability of results should be considered. The Review included a sample size of 13 of 42 PCNs. Since each PCN has largely evolved on its own, there may be practices in some PCNs that were not present in the sample chosen. There are also limitations to using a stratification approach to sampling. The stratified sample was selected based on size and geography, and by chance does not include any PCNs from the AHS Central Zone. There may be differences in financial or service practices based on zone.

Another limitation is that AHS was not consulted in the Review process. AHS is a PCN governance partner and provides key support to all PCNs, including involvement in the creation and approval of business plans. Additionally, enrollees of the PCNs and Albertans who live in areas covered by the PCNs were not consulted during the Review.

The Review is limited in scope to the PCNs and does not consider all elements of primary health care. It was undertaken as part of Alberta Health's internal oversight responsibility with regard to existing grants; the purpose was to address current oversight within existing policy. The Review does not address Alberta's progress toward attaining the vision for primary health care as outlined in Alberta's Primary Health Care Strategy.

PCN staff were enthusiastic about their participation in this Review, and were cooperative and collaborative during the Review. Although Alberta Health sampled PCNs using a stratified randomized process, there were many PCNs that volunteered to be part of the Review. Alberta Health thanks PCN staff and governance members for their open and honest assessments. All

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PCNs that participated in this Review conveyed a dedicated commitment towards improving the primary health care system for all Albertans.

Findings

The main finding in the analysis of the Review was that there is a great deal of variability in both service and financial practices across the sampled PCNs. For example:

- The PCNs are all targeting the five provincial objectives, but there is little evidence that they assess community health needs in a methodical manner to match their programs with community needs, allocate resources for priority areas, and evaluate to ensure results are aligned with objectives.
- The PMO is not providing consistent support for the PCNs to standardize in these areas.
- The PCNs reported relationships with AHS, as the joint venture governance partner, ranging from excellent to requiring significant improvement, with the majority reporting that their governance representatives changed too frequently and often were not at the right level within AHS to make decisions.
- There were instances where the PCN Administrative Leads were receiving remuneration that was higher than the guidelines provided and where the appropriateness of PCN spending for physician compensation was not clear.
- The Review found instances where the PCNs were using public dollars on expenditures that were inappropriate.
- Many sections of the Primary Care Initiative Policy Manual (PCN Policy Manual) are out of date and do not reflect modern day operations. The PCNs are unclear as to why Alberta Health has not released updates to the PCN Policy Manual.

Given that PCNs are now ten years old, the pace of development of effective inter-disciplinary teams has been slow. Ratios of physician to non-physicians in the PCNs are higher than evidence suggests as best practice.[5]

The Review considered the external and internal environments within which the PCNs operate and used, as a guide, evidence of the fundamental features of high performing health organizations: [6],

- explicit policy direction;
- primary care governance mechanisms at the community, regional and provincial/territorial levels;
- patient enrolment;
- inter-professional teams;
- patient engagement;
- funding and provider payment arrangement aligned with health system goals;
- health information technology that effectively supports patients and providers;
- ongoing performance measurement;
- coordination, integration and partnerships with other health and social services;
- systematic evaluation of innovation.

[5] Wranik, D. & Hanrahan, K. (2012). *The compensation and management of interdisciplinary primary health care teams in Alberta.* Edmonton, AB: Alberta Health
[6] Aggarwal, M. & Hutchinson, B. (2012). *Toward a Primary Care Strategy for Canada.* Ottawa, ON: Canadian Foundation for Healthcare Improvement.

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Findings

GOVERNANCE, ACCOUNTABILITY AND FUNDING

Governance: The role of the PCN Board is to exercise accountability and be responsible to stakeholders.

- The PCN Boards have evolved independently through joint ventures with AHS, with limited accountability to Alberta Health.
- The PCN Boards are comprised primarily of physicians and AHS officials, with no or limited involvement of community members.
- The PCN Boards' activities and evaluation practices vary, making it difficult to identify and assess good governance (i.e. where accountability has been upheld).
- There is limited evidence of how the PCN Boards exercise oversight responsibilities to ensure that management implement auditor recommendations.

Funding: The payment model for primary health care services.

- The majority of the PCNs indicated that the current four-cut funding methodology does not align with their need for consistent, sustainable funding, nor does it address the complexity of patient health care needs.
- The majority of the PCNs did not have job descriptions or remuneration grids for their staff, except for the Administrative Leads.

FINANCIAL MANAGEMENT AND POLICY

Operational policies: Practices and procedures that align with legal, legislative, and accountability requirements.

- The PCN Policy Manual has not been updated by Alberta Health since 2008 and is outdated in several areas.
- The PCNs' internal operating and financial policies and procedures are inconsistent, and in some cases, undocumented.
- Some of the PCNs have weak internal controls and there is evidence PCN funding may, in some instances, duplicate funding from Alberta Health for physician compensation.

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PATIENT SERVICE
Patient enrolment: Formally registering patients with a primary care organization, team or provider results in patients attaching to a health home and establishes a long-term relationship.
• The PCNs with initiatives to improve attachment were predominantly located in urban areas, while the PCNs that did not report such initiatives were located in rural areas and were smaller in size. • The PCNs do not have identified minimum hours of operation. • Only half of the PCNs reported having specific initiatives in place to connect unattached patients to family physicians.
Interdisciplinary: Integration of knowledge and expertise of several disciplines to develop solutions to complex problems in a flexible and open-minded way. Characterized by ownership of common goals and a shared decision-making process, all done with having the patients and the community at the forefront.
• The PCN Policy Manual does not specify appropriate panel size ranges, or provide direction as to the composition or size of a multidisciplinary team. • There is a large degree of variability in both the type of provider and number of full-time equivalents (FTEs) within the PCNs' non-physician teams.
Coordination, integration and partnerships: Facilitation of a patient's journey through health, social and other community-based services conducted out of a patient's health home.
• Coordination of care activity was found to exist primarily through connections that the PCNs established with specialists, hospitals and mental health services. • The PCNs have limited integration with home care and long-term care, community agencies, community addiction and mental health teams, and public health. • There is limited evidence of a collaborative approach to ensure coordination between the PCNs and AHS community-based services, so some PCN services may duplicate AHS services.

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EVALUATION AND PERFORMANCE MEASURES

Performance measurement and evaluation: Systematic, ongoing performance measurement and evaluation at multiple levels (practice, organization, community, regional and provincial) to inform and assess the impact of health services planning, management and improvement activities and as an accountability process.

- Some of the PCNs reported the need for measureable short-term and medium-term indicators for population health outcomes.
- There is limited evidence of how the PCNs link their current programs and services to population health outcomes.
- Some of the PCNs cover a wide geographic area, making program delivery to some of the populations a logistical challenge.

Business Planning: Formal statement of the primary health care program goals and objectives, reasons they are attainable, and the operational plans for reaching these goals and objectives. Also contains information about service gaps, community needs, the organization or the team attempting to reach those goals.

- The business plan and annual report templates do not reflect common terminology, nor do they capture all information required for Alberta Health to evaluate the PCNs' performance.
- The PCNs stated that more standardization of evaluation, job descriptions, panel identification education, data-sharing agreements, etc. would allow for improved planning and service delivery.
- The PMO is not consistently used by the PCNs in their business planning processes.

ROLES AND RELATIONSHIPS

Needs assessment: Systematic process for determining and addressing primary health care needs, or "gaps" between current and desired conditions.

- There is a lack of standardization in how the PCNs approach primary health care needs assessments in their respective communities.
- For the majority of the PCNs there did not appear to be an overarching strategy with regard to either data collection or analysis.

Policy Direction: Provides the vision of what a primary care system should be for all Albertans

- The PCNs find policy direction from Alberta Health lacking in some areas.
- The PCNs require clear policy direction and alignment of care with the overall health system and its sectors.

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2. Introduction

Alberta's Primary Health Care Strategy (PHC Strategy)[7] defines "primary health care" as the first place people should go for health care or wellness advice and programs, treatment of health issues or injuries, or to diagnose and manage physical and mental health conditions. Primary health care includes a wide range of services delivered by inter-disciplinary teams of providers. A high performing primary health care system is the foundation of an effective and efficient healthcare system capable of achieving superior health outcomes at lower cost.[8] Effective team-based primary health care has been found to decrease duplication of assessments, increase efficiency of information transfer between services, reduce medication errors and complications, decrease the number of emergency visits and hospitalizations, improve chronic disease prevention and management, pain and symptom control, and increase patient satisfaction.[9]

> "Improving Primary Health Care has been a major focus of health care reform across the country for more than a decade. Federal, provincial, and territorial governments agreed to pursue a number of reforms in the landmark accords of 2003 and 2004."
> – Health Council of Canada, 2010

In Canada, primary care services have traditionally been delivered by stand-alone family physicians. Unlike other high-income countries that began primary care transformation in the 1980s, in Canada there was limited attention to this area until early 2000s, when the First Ministers' agreement on health established the federal government's commitment of $800 million Primary Health Care Transition Fund (discontinued in 2006)[10]. Early attempts to reform primary care led to recognition that team-based care was a fundamental building block, encouraged physicians to practice in groups, and provided examples of mechanisms to incorporate multidisciplinary teams into primary care.

In 2002, Roy Romanow released his report "The Future of Health Care in Canada"[11] and recommended the following four elements to fuel primary health care reform:

1. Continuity and coordination of care;
2. Early detection and action (e.g., screening);
3. Better information needs and outcomes; and,
4. New and stronger incentives.

Alberta chose the PCN model, initially known as the Local Primary Care Initiatives, to fund inter-disciplinary care through an agreement involving the AMA and the Health Authorities. Although the

[7] Alberta Health. (2014). *Alberta's Primary Health Care Strategy*. Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf
[8] Saltman, R. B. & Figueras, J. (Eds). (1997). *European healthcare reform: Analysis of current strategies*. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0005/136670/e55787.pdf
[9] Canadian Home Care Association (2008). *Integration of care: Exploring the potential of the alignment of home care with other health care sectors*. Retrieved from http://www.cdnhomecare.ca/media.php?mid=1853
[10] Health Canada. (2007). *Primary Health Care Transition Fund*. Retrieved from http://www.hc-sc.gc.ca/hcs-sss/prim/phctf-fassp/index-eng.php
[11] Romanow, R. (2002). *Building on values: The future of health care in Canada*. Retrieved from http://publications.gc.ca/collections/Collection/CP32-85-2002E.pdf

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PCNs are now 10 years old, Alberta has continued to fund primary health care on the basis of physician-led enterprises, where team-based care is optional.[12]

In July 2012, an audit of the PCN model completed by the Office of the Auditor General recommended that:

- Alberta Health define clear expectations, and targets for PCNs, develop evaluation systems, engage Albertans to clarify what PCN they belong to and its associated services, and improve financial oversight; and
- AHS define goals and service delivery expectations, define performance measures and targets, and evaluate and report on PCN performance.

The PHC Strategy,[13] released in 2014, sets out a vision for the future: "*A primary health care system that supports Albertans to be as healthy as they can be.*"

In support of this vision, the PHC Strategy outlines guiding principles, strategic directions, and goals to evolve the primary health care system in Alberta and address systemic challenges. The aim of transformation is to improve access to quality health services, achieve better health outcomes, and ensure that everyone has a home in the health system.

The vision of a "health home" is a home base within the health care system, where Albertans can access primary health care services and be connected to other health and social services as needed. In a health home, individuals would have access to a core set of comprehensive primary health care services, delivered by a primary health care team. The primary health care team would also coordinate access to a range of other health and social services, such as specialist medical services, medical equipment, or community and social supports.

Health Home

A 'health home' is Albertans' home base within the health care system, where they can access primary health care services and be connected to other needed health and social services.

There is evidence that team-based care delivery is favoured by patients and providers. Evidence also indicates that it leads to improved system level outcomes and higher clinical performance by encouraging collaboration and care-sharing among providers.[14]

In a systematic review of inter-professional collaboration, fourteen of fifteen peer-reviewed sources reported that effective team collaboration led to positive results, such as reduced hospital admissions and re-admissions, reduced lengths of hospital stay, reductions in adverse events and cancelled surgeries, reductions in the number of semi-urgent pre-operative investigations, lower hospital-related mortality, lower outpatient costs, and a higher percentage of patient care dealt with in outpatient versus inpatient settings.[15] Inadequate communication between care providers or between

[12] Spenceley, S.M., Andres, C., Lapins, J., Wedel, R., Gelber, T. & Halma, L.M. (2013). Accountability by design: moving primary care reform ahead in Alberta. *School of Public Policy Research Papers 6*(28). Retrieved from http://policyschool.ucalgary.ca/sites/default/files/research/s-spenceley-care-reform.pdf

[13] Alberta Health. (2014). *Alberta's Primary Health Care Strategy*. Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf

[14] Wranik, D., Korchagina, M., Edwards, J., Bower, L., Levy, A. & Katz, A. (2015). *How best to pay interdisciplinary primary care teams? Funding and remuneration: A framework and typology*. Edmonton, AB: Government of Alberta

[15] Suter, E., Deutschlander, S., Mickelson, G., Nurani, Z., Lait, J., Harrison L., Jarvis Selinger, S., Bainbridge, L., Achilles, S., Ateah, C., Ho, K., Grymonpre, R. (2012). Can interprofessional collaboration provide health human resources solutions? A knowledge synthesis. *Journal of Interprofessional Care, 26*, 261-268.

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care providers and patients and their families has been found to be an important cause of sentinel events[16] in over 60 per cent of events.[17]

The literature on team effectiveness in primary health care public payer systems has found that "interdisciplinary primary health care teams function best in non-hierarchical environments".[18,19] Factors found to influence the effectiveness of health team collaboration include the degree of role clarity and trust across team members,[20,21] balanced power and status,[22] and opportunities for daily communication, such as is most available with co-location.[23]

The desired state for the primary health care system in Alberta is one that provides seamless support and quality health services for Albertans and their families, reaching beyond the traditional health system and into the community. This requires leveraging partnerships within primary health care, facilitating effective connections with other health services and social supports, and supporting people to manage their health so that they can lead healthier lives.

PCN Review purpose and objectives

The PCN Review (the Review) was undertaken by Alberta Health as part of its internal oversight responsibility. The Review involved an analysis of PCN financial practices and service delivery approaches. The purpose of the Review was to examine a sample of PCNs (referred to as "the PCNs") and the PMO to determine whether they are spending their funding and managing their operations appropriately, in accordance with current policy and oversight mechanisms.

The findings of the Review will inform ongoing work to improve the efficiency and effectiveness of primary health care service delivery in Alberta, to move toward the overall vision for "Albertans to be as healthy as they can be,"[24] and to improve the experience of patients using primary health care services.

The Review was designed to help Alberta Health identify best practices, as well as areas in need of greater policy implementation or refinement. Alberta Health aims to better support PCNs in all areas of their work and improve accountability for service delivery.

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[16] Sentinel events: serious adverse events, and including medication errors, wrong surgery site, suicide, operation and post-operative complications, and falls, among others.

[17] Joint Commission on Accreditation of Healthcare Organizations (2007). *Sentinel event root cause and trend data. Improving America's hospitals: The joint commission's annual report on quality and safety.* Retrieved from http://www.jointcommission.org/assets/1/6/2007_Annual_Report.pdf.

[18] Wranik, D., Hanrahan, K., & Tarrant, F. (2012). *Contractual arrangements and remuneration methods for interdisciplinary teams in primary health care in public payer systems: A framework.*, p. 13

[19] Wranik, D., Korchagina, M., Edwards, J., Bower, L., Levy, A. & Katz, A. (2015). *How best to pay interdisciplinary primary care teams? Funding and remuneration: A framework and typology* (p. 6). Edmonton, AB: Government of Alberta

[20] Baxter, S.K. & Brumfitt, S.M. (2008). Professional differences in interprofessional care. *Journal of Interprofessional Care, 22*(3), 239-251.

[21] Gaboury, I., Bujold, M., Boon, H. & Moher, D. (2009). Interprofessional collaboration within Canadian integrative healthcare clinics: Key components. *Social Science and Medicine, 69*, 707-715.

[22] Kramer, M. & Schmalenberg, C. (2003). Securing "good" nurse physician relationships. *Nursing Management , 34*(7), 34-38.

[23] Oandasan, I.F., Conn, L.G., Lingard, L., Karim, A., Jakubovicz, D., Whitehead, C., Miler, K.L., Kennie, N. & Reeves, S. (2009). The impact of space and time on interprofessional teamwork in Canadian primary health care settings: Implications for health care reform. *Primary Healthcare Research & Development, 10*, 151-162.

[24] Alberta Health. (2014). *Alberta's Primary Health Care Strategy.* Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf

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3. Methods

A stratified sample of PCNs was selected to include representation from urban, mid-sized rural and small-sized rural PCNs[25]. To achieve this, PCNs were randomly chosen from each of the three stratifications (urban, mid-sized rural and small-sized rural). The PMO is a program that is grant funded by Alberta Health through the AMA to provide operational and business administrative support services to PCNs, as well as tools and resources to support PCNs in communications, evaluation and quality improvement, and business planning. Therefore, the PMO was also included in the Review.

The Review examined the financial and the service components of the PCNs. Data were collected from a sample of 13 PCNs and the PMO to determine what is working well and where there is opportunity for improvement in financial management and accountability. Data collection included conducting staff interviews to understand PCN and PMO processes around finance and operations. Samples of expenditures for fiscal years 2013/2014 and 2014/2015 were also reviewed. In order to maintain the confidentiality and privacy of personal information that had to be viewed in the financial portion, 12 out of the 13 PCNs and the PMO received a site visit.

For the service portion of the Review, the data were collected through a combination of telephone interview, open-ended surveys of each of the 13 PCNs, and analysis of business plans, annual reports, evaluation documents, websites and community profile information for the years 2013/2014 and 2014/2015. Comparative analysis across data sources was undertaken. Eight of the 14 sites also had in-person site visits to validate the results of the Review through direct observation.

The data collection and synthesis of the Review was under taken from July to September 2015, and the report was prepared in October 2015.

Key limitations

The Review method aimed to address service and financial appropriateness, effectiveness, and efficiency using a stratified sample approach. The analysis focused on the appropriateness of the services identified and provided by the PCNs to their local populations, and a financial review and analysis of the 13 PCNs and the PMO.

There are a number of limitations that should be considered. Thirteen of 42 PCNs (31 per cent) were reviewed, and since each PCN functions independently, in that they have different mixes of health providers, different communities and variable business processes, there may be practices in some PCNs that were not evident in the sample chosen. A mitigating factor is that multiple methods were used to review the PCNs (interviews, questionnaires, business documentation review and site visits) and as the Review progressed, team members felt that they had reached saturation with respect to identification of new issues.

Another limitation relates to the stratified sample being selected based on size and geography. There are other methods of stratification that could have been contemplated; for example, AHS divides the province into five zones and PCNs could have been selected from each zone. By chance, the sample

[25] The range for Small-Sized Rural PCNs is between 12,100 and 35,921 patients
The range for Mid-Sized Rural PCNs is between 46,737 and 156,720 patients
The range for Urban PCNs is between 49,663 and 364,882 patients and is limited to those PCNs that resided within the boundaries of Alberta's two largest urban centres (Edmonton and Calgary).

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selected does not include any PCNs from the Central Zone and, while it is unlikely, there may be some systematic differences in financial or service practices based on zone.

Another major limitation of this analysis is that AHS was not consulted in the Review. AHS is a governance partner and provides key support to all PCNs. AHS is involved in creation and approval of business plans that were reviewed. Additionally, enrollees of the PCNs or Albertans who live in areas covered by the PCNs were not consulted in the Review.

The Review is limited in scope to the PCNs and does not consider all elements of primary health care. It was undertaken as part of Alberta Health's internal oversight responsibility with regard to existing grants; the purpose was to address current oversight within existing policy. The Review does not address Alberta's progress toward attaining the vision for primary health care as outlined in the PHC Strategy.

Although PCNs are currently the dominant model of primary health care organization in Alberta, some patients still receive care from physicians who are not registered with a PCN. In addition, primary health care is delivered by a number of different health care providers and in a number of different environments not affiliated with PCNs. This may include services offered by:

- allied health professionals working in clinics (but not affiliated with PCNs);
- public health centres not affiliated with PCNs;
- hospital-based academic family medicine programs;
- university health centres;
- pharmacists (comprehensive annual care plan, patient assessment and prescription renewal);
- community-based addiction and mental health services;
- emergency departments;
- ambulatory care centres;
- urgent care clinics;
- community health centres (CHCs);
- family care clinics (FCCs);
- Health Link Alberta;
- myhealth.alberta.ca;
- walk-in clinics[26] .

As such, findings and discussions in this report are primarily applicable to the service, financial and administrative processes, practices and policies of the PCNs and the PMO. In addition, the report is envisioned to support areas where the PCNs, Alberta Health and AHS, as system contributors, can improve primary health care delivery.

The Review was not intended to achieve the following:

- The Review is about PCNs and not Alberta's primary health care system in its entirety. However, the primary care system in Alberta is largely organized and resourced through the PCN model, since 80 per cent of the primary care physicians in Alberta are linked with and

[26] Alberta Health. (2014). *Alberta's Primary Health Care Strategy*. Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf

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influencing the work and governance of the PCNs, and 3.3 million Albertans are receiving services connected to PCNs.

- The financial portion of the Review was not a detailed financial audit, and may not be inclusive of all PCN expenditure categories or financial processes.
- The Review was not a formal program evaluation, and results should not be interpreted as such.
- The Review was not an evaluation of the performance of any individual PCN. It was to examine the elements of accountability and appropriate use of resources along with noting the issues or strengths that emerged.

What are Primary Care Networks (PCNs)?

PCNs were established in Alberta through the 2003 Primary Care Initiative (PCI). A PCN is a model that provides funding, through a grant agreement with Alberta Health, to a non-profit legal entity to deliver team-based primary health care. A PCN is a network of physicians and other health providers such as nurses, dietitians and pharmacists working together in partnership with AHS to provide primary health care to patients. PCNs are currently the most common model of primary health care organization in Alberta.

PCNs aim to achieve the following five provincial objectives[27]:

1. Increasing the proportion of Albertans with ready access to primary health care;
2. Managing access to appropriate round-the-clock primary care services;
3. Increasing the emphasis on health promotion, disease and injury prevention, and care of patients with complex problems or chronic diseases;
4. Improving the co-ordination of primary care with hospital, long-term and specialty care, and;
5. Facilitating the greater use of multi-disciplinary teams in primary health care.

Quick Facts:

- The first PCNs opened in 2005 and celebrated their 10th anniversaries last year.
- As of February 2015, there are 42 PCNs across Alberta, serving 3.3 million of 4 million Albertans.
- 2014/2015 annual funding for all 42 PCNs across Alberta was $205 million. (This is distinct from the physician compensation component of primary care, which is funded separately.)

A PCN can include one member clinic with many physicians and support staff, or physicians in several member clinics spread over a self-determined geographic area. Family physicians continue to operate their own practices and their patients have access to the PCN providers and services.

Current state

There are 42 PCNs operational throughout Alberta as of March 2014.[28] The majority of Alberta's family physicians (80 per cent) participated in a PCN. There were 904 other health care providers hired through PCN funds to provide inter-disciplinary care working in the province's 42 PCNs. This

[27] Government of Alberta. (June 2008). *Primary Care Initiative Policy Manual*. Edmonton, AB: Government of Alberta.
[28] See map on page 16 for general boundaries of PCNs

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represents a non-physician to physician team ratio of about 0.3 to 1. An important limitation is that statistics are not available that include non-physician team members who are hired directly by individual family physicians or clinics, or inter-disciplinary team members who are hired by AHS, but work in PCNs. The actual non-physician to physician team ratio could, therefore, be higher.

As of February 2015, 3.3 million Albertans have accessed services from a PCN, and over 60 per cent of PCNs have begun to formally attach their patients to health care teams. Changes like these are expected to result in improved population health outcomes, such as the 16 per cent increase in prevention screening that has been reported for patients who belong to PCNs[29]. Approximately 81 per cent[30] of PCN family physicians are using an electronic medical record. In October 2014 Alberta Health introduced a requirement in the Alberta Health grant agreement for PCNs to report on eight system-level indicators to monitor progress toward achieving primary health care goals.

Sustaining progress

While progress has been made on a number of primary health care milestones, such as inclusion of the system level indicators in the PCN grant agreements, more work is required. Arguably, Alberta has established a strong foundation for delivery of primary health care services and supports, but Albertans who live with complex health needs do not always have access to the most appropriate services within their health homes; health professionals are not always able to coordinate care for their patients across differing health settings and Albertans are not always included as partners in their own care. To ensure primary health care continues to develop in a way that best meets the needs of Albertans, Alberta Health has therefore undertaken the Review as part of its efforts to identify how such issues are currently being addressed through the PCN model.

PCN boundary map

The grey-coloured areas represent approximate boundaries of PCNs (based on postal code). It is important to note that PCNs that appear large on the map may actually be a small-sized PCN due to patient enrolment numbers. They appear large due to travel patterns of Albertans accessing PCN services from broad catchment areas.

[29] Alberta Screening and Prevention (ASAP). (February 2015). ASAP Results Review, Towards Optimized Practice [Power Point Slides], slide 14.
[30] Canada Health Infoway. (2014). The national physician survey. Retrieved from https://www.infoway-inforoute.ca/en/component/edocman/2163-2014-national-physicians-survey/view-document?Itemid=101

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4. Governance, accountability and funding

High performing primary health care systems have a number of common features: governance mechanisms at the community, regional and provincial levels; explicit policy direction anchored in public values, needs and preferences; and funding arrangements aligned with health system goals.[31]

Governance and accountability

A PCN is created through a Joint Venture Agreement (JVA) between a group of family physicians, who form a Non-Profit Corporation (NPC), and AHS. The physician NPC and AHS jointly govern the PCN, and are accountable to Alberta Health through a grant agreement. To create a PCN, there are two types of governance models.

- Model 1: The Physician NPC and AHS each identify two representatives to serve on the governance committee to oversee PCN operations. The majority of the PCNs use Model 1;
- Model 2: The Physician NPC and AHS establish a PCN Not for Profit Corporation (NPC), and the governance board of the NPC assumes the governance role of the PCN.

Depending on the model, a joint venture governance committee or a governance board governs each PCN, and each PCN must follow policies set out by Alberta Health through grant funding agreements, and in the PCN Policy Manual. Partnership agreements with AHS create another set of expectations. Regulated health care providers are bound by their professional college (e.g., College of Physicians and Surgeons of Alberta, College and Association of Registered Nurses of Alberta, etc.). While each of these layers plays a role in establishing accountabilities, there may be a potential for lack of coordination in the provision of primary health care across geographic areas of the province.

It was noted that some of the PCN boards took the initiative to continuously improve board effectiveness; however, governance practices are not consistent across the PCNs and the Review found examples of ineffective governance practices in some of the PCNs. For example, important audit recommendations were not always implemented by management, and the PCN Boards did not always exercise oversight responsibilities to ensure that management implemented auditor recommendations.

Some of the boards met monthly and some met as required (an average of approximately every two months). The majority of board membership is comprised of physicians working in the PCNs and AHS officials, which brings into question board independence, as these direct care provider physicians have a significant influence on how resources are allocated to the types of services offered by the PCNs. The Administrative Lead is a key management position within the PCN structure and the Boards did not consistently hold in-camera sessions without management present, as best practice requires. In such instances, there is a possibility of conflict of interest, but there is limited evidence of board policies to mitigate such conflict of interest in the decision-making process.

A best practice for board composition is for board members to be independent from management, but this is not the case for the PCNs, as PCN physicians comprise a significant portion of board membership. Since most of the board members are physicians or AHS officials, perspectives from non-physician health care providers or community members are not necessarily considered. The

[31] Aggarwal, M. & Hutchinson, B. (2012). *Toward a Primary Care Strategy for Canada.* Ottawa, ON: Canadian Foundation for Healthcare Improvement.

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Review revealed that some, but not all of the boards are self-assessing for effectiveness. While most boards meet regularly and adhere to pre-scheduled meetings in order to ensure adequate time for management oversight, it is not clear that this practice has been adopted by all of the boards.[32]

Funding

As part of the obligations under Alberta Health's grant agreements, PCNs submit three-year business plans to Alberta Health, which set out how each PCN will meet the primary health care needs of its community and fulfill objectives through identified service responsibilities. PCNs also submit regular reporting to Alberta Health, including progress and financial reports. Alberta Health reviews each document to ensure financial accountability and compliance with program policies and objectives at high level.

Funding is provided through the grant agreement for PCNs to hire non-physician health providers and to deliver services and programs that are not included in the Schedule of Medical Benefits.[33] Alberta Health provides PCNs with per-capita grant funding of $62 per patient per year, which goes to the physician Non-Profit Corporation (NPC) or the PCN NPC depending on the legal model of the PCN.

Funding for PCNs is determined through a four-cut methodology that is based on physician interaction with patients, measured at two points annually (March and September).

In fiscal year 2014/2015, Alberta Health's total expenditures for the 42 PCNs and the PMO were $208 million. Also in 2014/2015, AHS budgeted approximately $180 million for primary health care services, which is not limited to PCNs, but also includes allocations for Family Care Clinics, Ambulatory Care Clinics, Chronic Disease Management programs and services, and other services. In addition, fee-for-service payments and alternate relationship plan payments for primary care physicians were $1.27 billion for 2014/2015.

Four-Cut Funding Methodology

Step 1:
Patients who have seen only one physician are assigned to that physician.
Step 2:
Patients who have seen more than one physician, but where one physician is predominant, are then assigned to that physician.
Step 3:
Patients who have seen multiple physicians the same number of times are assigned to the physician who did the most recent physical exam.
Step 4:
Patients who have seen multiple physicians the same number of times and had no physical examination done are assigned to the physician whom they saw last.

Based on the annual reports submitted by the 13 PCNs whose total expenditures in 2014/2015 consisted of $111 million, the bulk - $90 million or 81 per cent of PCN funding was used to support the PCN identified priority initiatives. On average, only 53 per cent of PCN funding went to the hiring of other health providers, while 12 per cent went to physician support, 28 per cent to administration costs and 12 per cent went to indirect patient costs such as patient panelling and

[32] Comforth, C. (2001). What makes boards effective? An examination of the relationships between board inputs, structures, processes and effectiveness in non-profit organizations. *Corporate Governance: An International Review*, 9(3), 217-227.
[33] The Schedule of Medical Benefits is a list of medical benefits and fee schedule for medical benefits insured under the Alberta Health Care Insurance Plan. See http://www.health.alberta.ca/professionals/SOMB.html

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scheduling of patient visits. This reflects actual expenditures for the PCNs for the 2014/2015 fiscal year, which is 5 per cent above the PCN funding for that fiscal year. Alberta Health approved PCNs' use of surplus funds up to the 2015/2016 fiscal year. As per Alberta Health direction, as of April 1, 2016, PCNs are no longer allowed to utilize surplus funds or unexpended grant funds.

Business plans provide details about planned expenditures for activities associated with various PCN initiatives, but currently this is embedded in business plan narratives, and there is no summary documentation that provides for consistent comparison within and across the PCNs. In addition, the budget documentation submitted is at a high level and only shows total funding to be spent by each priority initiative.

> "It all begins with funding; the current methodology of funding is not conducive to community-based needs. The needs of each community are different... therefore, programming needs to be developed and tailored to meet those needs. The current funding does not allow for this. As well, the complexity of those needs is different for each community based on the population base."
> – PCN

All of the PCNs indicated that the current funding model is not appropriate the meet the primary health care needs of the communities in which they operate. This is somewhat supported through the finding above that spending is not always in line with objectives of the PCNs, which can be partially attributed to the disconnection between the current funding methodology and PCN program objectives. One of the key goals of PCNs is to facilitate the greater use of multi-disciplinary teams in primary health care, yet funding is based solely on PCN physicians' panel sizes.

The PCNs indicated that the current funding model (four-cut method) does not align with PCN need for sustainable programming, nor does it address depth of complexity of some patient treatment or programs offered. A blended funding model was the most common solution, suggested by the majority of the PCNs.

Physician compensation

PCN per capita payments are primarily meant to pay for non-physician primary health care services. While there are allowable physician expenses within the PCN Policy Manual, there is a lack of clarity about what physician direct and indirect patient care expenses should be eligible through the PCN grant funding. In addition, fee-for-service (FFS) compensation for insured services that physicians receive has incorporated overhead costs. Therefore, payment of physician PCN administrative expenses through the PCN funding may unintentionally lead to duplication in funding of physician overhead or administrative cost.

While the PCN Policy Manual does not provide clear guidelines for eligible and ineligible use of PCN grant funding to compensate specifics of physicians' overhead costs, PCNs are expected to have internal policies and procedures to ensure that PCN funding does not compensate physicians for the various PCN administrative non-clinical types of work that are deemed to be overhead costs. In addition, the role of

> "The best opportunity that exists is developing a community- and activity-based funding model that the PCNs, other community service agencies and Alberta Health work together on. This type of funding model promotes community-based program development, in turn increasing access to the primary health care, invoking a state of change to preventative care."
> – PCN

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the PMO in supporting PCNs with their budgets and business plans is intended to ensure that PCNs have access to expert advice in this area.

PCN physicians are compensated similarly to all Alberta physicians, through three mechanisms: fee-for-service (FFS), Alternative Relationship Plans (ARPs) and the Clinical Stabilization Initiative (CSI) programs (see Appendix A). Over 80 per cent of physicians in Alberta ($3 billion of Alberta Health's total budget) are paid by FFS.

All of the PCNs report "no show" patient rates in the 20–30 per cent range. These are patients who do not attend their scheduled appointments. Follow-up calls are made to these patients. Visiting specialists bill the PCN for each "no show" in their rotating clinic visits.

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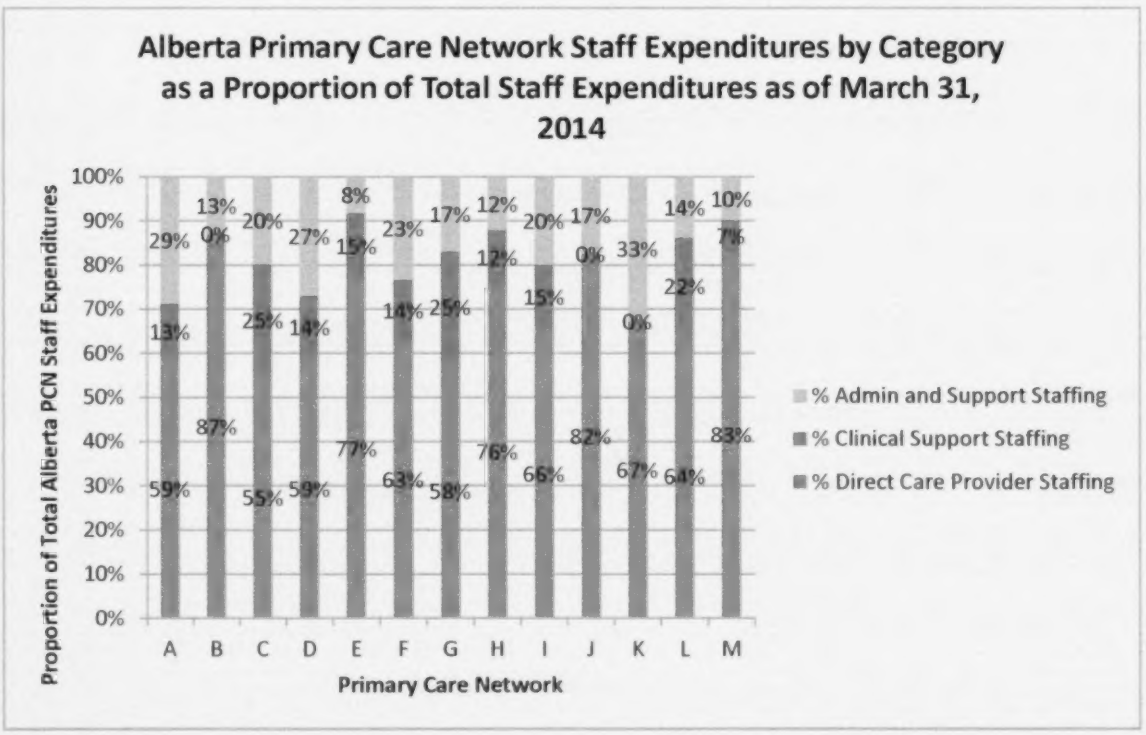
5. Financial management and policy

Financial management

For the most part expenses reviewed were aligned with PCN objectives and with the business plans and budgets submitted to Alberta Health; however, issues were noted in two areas: Administrative Lead salaries and payments to physicians. The majority (68 per cent) of the PCNs' funding is used to pay for expenses directly tied to the provincial objectives of the PCNs, such as non-physician salaries (including multi-disciplinary team members such as nurses, dietitians, and social workers). In addition, PCN funding may also be used for activities that support patient care, such as medical supplies and equipment and clinic costs.


Alberta Primary Care Network Staff Expenditures by Category as a Proportion of Total Staff Expenditures as of March 31, 2014
Proportion of Total Alberta PCN Staff Expenditures
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
A B C D E F G H I J K L M
Primary Care Network
29% 13% 20% 27% 8% 23% 17% 12% 20% 17% 33% 14% 10%
13% 0% 25% 14% 15% 14% 25% 12% 15% 0% 0% 22% 7%
59% 87% 55% 59% 77% 63% 58% 76% 66% 82% 67% 64% 83%
% Admin and Support Staffing
% Clinical Support Staffing
% Direct Care Provider Staffing

Administrative lead compensation

Within the PCNs, the PCN Administrative Lead salaries[34] varied considerably. In January 2015, the Executive Director Compensation Guidelines[35] were released in order to support open, transparent and defendable decision-making related to salary and compensation decisions for PCN Administrative Leads. While this document allows for standardized base salaries depending upon size of PCN, and the experience, skill, education, qualifications and performance of the incumbent, the document does not address benefits payments.

[34] PCN Administrative Lead salaries are defined as the costs of the individual hired by AHS/Physician Joint Venture partners to manage the business of the PCN whatever their title may be (e.g., Executive Director, Business Manager, etc). Costs include wages and benefits. This position cannot exceed 1 full-time equivalent.
[35] Alberta Health. (January 2015). Alberta Primary Care Networks Executive Director Compensation Guidelines, Joint Venture Council.

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Physician payments

Physician costs include amounts paid to physicians for providing clinical services, on-call services, and administrative work relating to PCN activities. Although this spending is consistent with business plans submitted by the PCNs, based on current structure of all physician payments it is not clear whether there is duplication of funding to physicians through various payment streams. In addition, it is unclear whether or not the PCNs' funding is being used to pay for costs that are covered by other Alberta Health funding streams.

The following are some examples of specific types of physician payments:

- Physicians are remunerated using various mechanisms for obstetrics on-call work, and there is significant variation across the PCNs. Some of the PCNs pay $1,000/week for obstetrics on-call. Some of the PCNs fund obstetrics on-call at $220/12 hour weekday shift, $330/12 hour weeknight shift and $660/24 hour weekend and holiday shifts. Others pay $200/24 hour on-call shift.
- Some of the PCNs pay physicians to work in their after-hours clinic. In one instance a physician receives $173/hour plus 50 per cent of any billings over the guaranteed hourly rate for working at the after-hours clinic. In another instance, the physicians are guaranteed a minimum shift payment of $222/hour, which the PCN pays after taking into account the physicians billings relating to the after-hours clinic work.
- Some physicians are flowing their FFS payments to the PCN and the PCN is then remitting the physicians an agreed upon percentage of the billing, with the remainder being retained by the PCN as payment for overhead. Based on the information available in the PCNs' financial books, it could not be determined whether this is resulting in potential overpayments to physicians based on SOMB standards for payment. Similarly, some of the PCNs bill Alberta Health for the work done by physicians in the PCN and then pay the physicians a flat daily rate of $1,400/full day and $800/half-day.
- It was noted that one PCN paid for locums at a rate of $1,000/day.
- Some of the PCNs pay specialists for "no-show" appointments. One PCN paid specialists $207/hour for such patient no-shows. Given that the specialists could not bill for their own patient no-shows within their private practices, it is not clear whether they should be allowed to bill for PCN patient no-shows. Another PCN paid specialists $235/hour; in this instance one specialist received $416 from the PCN for 3 hours of work, which represented a top-up payment to the specialists' fee-for-service billings of $288 for those 3 hours to bring the specialist to the full guaranteed fee of $235/hour.
- Most of the PCNs spend at least some of their funding to pay for physician education and conferences.

Physicians are involved in administration of PCNs and multi-disciplinary teamwork as anticipated when PCNs were formed. However, there are instances of expenditures that would be considered inappropriate and instances where payment is questionable given the objectives of PCNs. These will be discussed below.

Ineligible expenditures

The PCN Policy Manual (2008) defines some of the expenditures for which PCN funding can be used, but it does not consider many of the expenditures that have arisen as the PCN model has

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developed. The following expenditures may be considered ineligible, as they do not relate to the objectives of PCNs.

- **Personal**: One PCN's credit card statements included personal expenses. The PCN auditor's management letter indicated that credit card statements are not being reviewed by the PCN board, allowing for personal expenditures to go unnoticed.
- **Alcohol**: Three PCNs paid for alcohol through their funding for meetings and events.
- **Donations**: Three PCNs donated some of their funding to support community programs or to provide grants to patients in need.

Questionable expenditures

The PCN Policy Manual does not address many types of expenditures. The following expenditures may be considered questionable and possibly inappropriate, as it is not clear how they align with the objectives of PCNs, support multidisciplinary care, or are a suitable use of public funds.

- **Duplicate Funding**: There were a few instances of PCN funding being used to make payments relating to AMA programs funded by Alberta Health.
- **Physician Funding**: At some of the PCNs, physicians receive a percentage of the funding as a multidisciplinary team fee or a communication fee for attending meetings and filling out questionnaires. At many of the PCNs, physicians are paid for their time driving to and attending meetings at the sessional ARP rate ($211.75/hour in 2014/2015). Some form of physician compensation for PCN administration is reasonable, but it is not clear that this rate is appropriate.
- **AHS**: Two PCNs paid AHS for space rental or services provided.
- **Consultants**: The PCNs spent an average of two per cent of their funding on consultants. It is not clear whether PCN funding should be spent on consultants for the corporation.
- **Research**: Two PCNs paid grants to universities for research. It is not clear that PCN funding should be used to fund such research work.
- **Information Technology (IT)**: PCN funding is used to pay for various IT-related costs as well as EMR fees. The Manual does not indicate which IT costs can be funded through PCN funding and to what extent.
- **Catering and Social Events**: The PCNs spend less than one per cent of their funding on catering and food. Some of the PCNs paid for staff social functions.
- **Employee Recognition and Gifts**: Some of the PCNs use their funding to buy gifts for staff, rather than paying for these items through personal funds.
- **Equipment and Subsidies to Patients**: Some of the PCNs provide pedometers to their patients or subsidize patients' gym memberships. This means some Albertans are receiving additional benefits as a result of belonging to a specific PCN, while others do not.

Although the PCN Policy Manual does not provide clear policy on what is ineligible for funding, any board that is accountable for utilizing public funds has a responsibility to safeguard against the use of those public funds for inappropriate expenditures.

Closing cost reserve

Closing cost reserves are required through the joint venture agreement between AHS and the physician group and this reserve represents the amount that the PCNs would have to pay if they

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needed to wind down their operations at any point. The OAG PCN report in 2012[36] questioned whether there is value in having PCNs set aside large sums as closing cost reserves.

Through the Review it was noted that all of the PCNs record this contingency on their financial statements and some set money aside in their bank accounts for this reserve. This means that such funding cannot be used to pay for PCN programs. Given that this reserve is not required as part of Alberta Health's funding, and that the government would fund any closing costs that would arise if PCNs were asked to stop operating, it is not clear what the benefit of recording such a reserve would be. Many of the PCNs noted that they would support Alberta Health removing the requirement to record the closing cost reserve as it takes them a lot of time to determine the closing cost reserve and also reassess on an annual basis.

For the 13 PCNs, there was a total of $14.8 million set aside on the financial statements for closing costs; some of the PCNs are setting money aside in a bank account so that this reserve is available if needed. These funds could better be used to fund other current government priorities. As noted in the 2012 OAG PCN report, the Review found that the PCNs set aside large sums as closing cost reserves.

Lost potential economies of scale

Expenses on program and PCN evaluation activities ranged from one to 14 per cent with an average of five per cent of overall funding per fiscal year (11 PCNs reporting). These costs are for evaluation staff or consultants and other expenses related specifically to evaluation. Many of the PCNs suggested introducing centralized spending or standing offers for expenditures that all PCNs incur—for example, RRSPs, pension plans, benefit packages, marketing, and evaluation—to help the government achieve some economies of scale.

Policy

PCN Policy Manual

PCNs currently rely on the original version of the PCN Policy Manual, which was completed in June 2008. Many sections of the manual are now out of date, and PCNs may be unaware of current policy. Although there has been work undertaken to update some of the policies, due to changes in government and resulting changes in policy direction, updates have not been released. The PCNs noted that they are unclear as to why Alberta Health has not distributed updated policies. The PCNs themselves have requested updates be made to the PCN Policy Manual to reflect modern day operations and to provide clear guidance for informed decision-making.

For example, the PCN Policy Manual indicates that PCNs can compete for patients (section 7.1(f), Enrolment), but it also infers patients should only be enrolled in one PCN (section 8, Encounters). However, if a physician is involved with more than one PCN as an "Associate Provider," a patient may see more than one physician at more than one PCN. It was indicated that this was one of the sources of confusion for PCN staff in validating panels.

The PCN Policy Manual indicates that clinical training for physicians would be compensable if it involves "specialized training;" however, there is currently no definition or criteria to substantiate what would constitute eligible training. Other than stipends paid for psychiatry, gastroenterology,

[36] Auditor General of Alberta. (2012). *Report of the Auditor General of Alberta.* Retrieved from http://www.oag.ab.ca/webfiles/reports/OAGJuly2012report.pdf

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neurology and on-call obstetrics that were noted in some of the PCNs, there was no indication during the Review of any special procedures being performed by family physicians. Rotating specialist clinics, including dermatology, through the PCNs are staffed by the requisite specialist.

PCN operational policy

Some of the PCNs were found to have internal operational and financial policies and procedures, but they were not consistent across the PCNs. Notable exceptions were found in some of the smaller-sized PCNs that did not have documented policies and procedures, in particular over their financial and operational processes.

While some of the PCNs had policies in place, instances of poor internal controls were noted. For example, some of the PCNs had instances where the payee was also the approver on the transaction, where transactions were not adequately supported, and where claims submitted by physicians and staff were not signed by the claimant. Review of PCN auditors' findings also revealed internal control deficiencies, such as lack of evidence of approval of credit card expenses by the board, errors in Excel files, only one signatory on a cheque when two are required, and bank reconciliations not being completed in a timely manner. Without consistent and strong controls over financial processes, Alberta Health cannot ensure PCNs are accountable for their funding. Best practices show that requirement of minimum controls over financial transactions could include the following: a review of all expenditures by two individuals and that any expenditure that relates to one of the signatories must be reviewed by two independent individuals; requirement for travel and expense claims to be supported by a travel or expense claim form that is reviewed by at least one other individual higher than the claimant and would have all supporting receipts attached to the claim.

Some of the PCNs have processes and services in place that incur cost, but are not reflected as an explanatory line item in the budget. This is due in part to limited information or categories entered on the budget document, such as "other", "administrative" or "miscellaneous". Staff education, including physicians, is entered frequently, but there is no indication of the approval process or rationale of how said item improves provision of primary care to patients.

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6. Patient service

High performing primary health care systems have been found to include a number of elements that lead to more effective care, including: patient enrollment; inter-professional teams; patient engagement strategies; coordination, integration and partnerships with other health and social services; decision support; and support and training for quality improvement.[37] In addition, high performing primary health care has explicit direction that will align the care and delivery with the care needs of the population.[38]

In Alberta, PCNs are required to meet five provincial objectives that collectively address the features outlined above. These objectives include:

- access (which includes enrollment, or attachment as it is referred to in Alberta);
- round-the-clock primary care service;
- promotion, prevention and complex and chronic care;
- coordination of care; and
- team-based care.

While considerable variation was found in the PCNs' approaches to program and service delivery, this chapter outlines a number of good practices and quality service delivery examples.

Access

Attachment

Attachment

Attachment is the expression of a continuous and longitudinal relationship between individuals and their health care providers. While the concept refers to a relationship, it can also refer to the representation of such a relationship through formal, signed agreement between a provider and an individual.

The first objective of PCNs is to increase the proportion of Albertans with ready access to primary care. Currently, approximately 20 per cent of Albertans report not having access to a regular family physician.[39] Attachment relationships between providers and individuals are necessary to ensure that Albertans receive appropriate primary health care services to meet their needs.

The goal of attachment is to move from a system where people may have difficulty accessing essential primary health care services to one where people have same day access to a member of their own primary health care team (where they have a continuous relationship and care plan) when required, and do not have to use emergency departments for primary health care access. Formal attachment to primary health care teams will increase individuals' awareness of available health services and improve the continuity of care. It links Albertans to a specific provider or health care team. The provider or health care team commits to providing accessible care, and the

[37] Aggarwal, M. & Hutchinson, B. (2012). *Toward a Primary Care Strategy for Canada.* Ottawa, ON: Canadian Foundation for Healthcare Improvement.
[38] Aggarwal, M. & Hutchinson, B. (2012). *Toward a Primary Care Strategy for Canada.* Ottawa, ON: Canadian Foundation for Healthcare Improvement.
[39] Tholl, B. & Grimes, K. (2012). *Strengthening primary health care in Alberta through Family Care Clinics: From concept to reality.* Retrieved from http://www.health.alberta.ca/documents/PHC-FCC-Concept-to-Reality-2012.pdf

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patient commits to seeking services from that specific team. Formal attachment strengthens the individual-provider relationship over time and ensures individuals know who their care teams are.

Attachment and panel management are not new concepts in Alberta. For example, the four-cut funding methodology used to associate patients with a PCN for the purposes of calculating per-capita payments has been helpful in approximating attachment. However, the intent of the four-cut methodology is to calculate funding, and not to be a mechanism for attachment. This methodology is based on past utilization patterns and is not an explicit agreement between an individual and a provider that establishes formal attachment.

Therefore, in 2014, Alberta's Provincial Attachment Policy was developed to provide direction on the model and process for formal attachment in Alberta. The Provincial Attachment Policy was developed in collaboration with a variety of stakeholders from primary health care delivery, administration, and academia. An implementation strategy has been developed.

Only half of the PCNs identified specific initiatives in place to connect unattached patients to family physicians. The PCNs with initiatives in place were predominantly located in urban areas. Some of the PCNs targeted their efforts towards specific groups of unattached patient populations, such as high risk children and families, patients seeking maternity services, or women. A number of the urban PCNs cited the Calgary Zone web registry (calgaryareadocs.com) as a means through which to engage in coordinated patient attachment.

Wait times

As the PCN is meant to be the first point of access for Albertans to receive primary health care services, it is important for them to be able to access services in a timely way when required. Where Albertans require services, but cannot access the PCN in a timely way, they are more likely to use emergency departments as their first contact. In addition, where availability is not timely within a PCN, Albertans may end up utilizing multiple primary health care organizations, resulting in a lack of coordinated care.

In 2015, Alberta Health introduced a primary health care indicator that will enable PCNs to track progress on access: the time to Third Next Available (TNA) appointment measure. The TNA appointment measure provides feedback on the amount of time a patient has to wait to see a member of the health professional team and measures the success of backlog reduction. This measure is one of the system-level indicators that Alberta Health will require PCNs to report on. For the current fiscal year, the reporting required by Alberta Health was "progress toward being able to report."

Third Next Available Appointment (TNA)

TNA is the most basic measure of access, where the clinic scheduling staff member is asked to count the number of days to the TNA appointment for all providers within a practice, one time per week, and record this information for examination over time.
– PCN Evolution

Some of the PCNs were able to report on third next available appointment. On average, patients were seen same day or next day, with some of the smaller PCNs reporting an average of three days.

For some patients, the right provider to provide required health care services may be a nurse, dietitian, social worker, or other health care professional. One PCN indicated that a physician

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referral was required for patients to see non-physician health professionals located at the centralized office, which sometimes resulted in a one week wait for the patient to receive service.

Round-the-clock primary care service

The second provincial objective of PCNs is to manage access to appropriate round-the-clock primary care service.

One of the guiding principles of the PHC Strategy is "Accessibility" which outlined requirements for the primary health care system to provide all Albertans with timely access to services through arrangements that facilitate 24/7 access to appropriate services.

The College of Physicians and Surgeons of Alberta (CPSA) has also stipulated requirements for family physicians with regard to the provision of after-hours service. For example, CPSA requires family physicians to fulfill the following requirements:

- Directly provide or arrange for continuous after-hours care to be provided through an appropriate healthcare provider(s) or service with capacity to assess and triage care needs;
- Ensure handover of relevant patient information to the after-hours healthcare provider(s) or service when a patient's need for after-hours care is reasonably foreseeable; and,
- Inform patients how to access the after-hours care.[40]

Health Link and PCNs

Health Link is the province's free 24-hour health advice and information line. Health Link provides 24/7 telephone-based registered nurse advice and general health information for Albertans, information on diseases, treatments, staying well, and healthcare services. In the Calgary area, Health Link can refer Albertans to a PCN after-hours clinic when their need is for primary health care.

Only a few of the PCNs provided after-hours access. The nature and scope of services offered by the PCNs also varied, with some of the PCNs offering after-hours access only for some specific targeted populations, such as low-risk maternity care patients, while other PCNs offered their services on a broader scale, such as for patients with "minor injuries and illnesses that are not life threatening." Some of the PCNs simply assigned a physician-on-call who did not necessarily see the patient, but dispensed advice over the telephone or referred the patient to Health Link. Two of the rural PCNs reported that plans are in place to establish after-hours services in 2016.

There were also discrepancies in the information provided by the PCNs, as one PCN reported offering 365 day 24/7 access in their questionnaire, while indicating only limited hours of availability on their after-hours clinic website.

The PCN Policy Manual does not define after-hours access, such as standard operating hours or the minimum number of hours and days per week that PCNs should be accessible to the public. Defining standard hours of operation for PCNs would provide clear guidelines and minimum requirements for the after-hours operations of PCNs. As the community needs and service offerings of each PCN can vary, defining a standard minimum number of hours of operation may represent

[40] College of Physicians and Surgeons. (2011). *Standards of practice: The minimum standard of professional and good practice expected of Alberta physicians.* Retrieved from www.cpsa.ab.ca/Libraries/Res_Standards_of_Practice/CPSA_Standards_of_Practice_Consolidated_Version.pdf

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the most flexible approach to ensuring primary health care services are provided in the communities served by PCNs.

Promotion, prevention, and complex and chronic care

The third provincial objective of PCNs is to increase the emphasis on health promotion, disease and injury prevention, and care of patients with complex problems or chronic disease.

The PHC Strategy articulated the need for a specific focus on wellness, prevention, chronic disease management, and systematic screening. The PHC Strategy emphasized that there was also a need for greater self-management support for Albertans.

Health promotion and prevention

The PHC Strategy identified proactivity as a specific principle, focusing on the issues of health promotion and prevention. Primary health care services are envisioned to emphasize proactive approaches to prevention and health promotion, addressing root causes rather than symptoms and involving Albertans as active participants in improving their health.

The PCN Policy Manual identifies four service responsibility areas through which the PCN is directed to meet the health promotion, prevention, and chronic and complex care objective: basic ambulatory care and follow-up; care of complex problems and follow-up; screening/chronic disease prevention; and well-child care. Some of the service responsibility areas target the entire PCN population, while others focus on individuals with complex problems or specific demographics such as parents, infants and children.

2008 PCN Policy Manual	
PCN Objective	**Increase the emphasis on health promotion**
Service Responsibility	Health Promotion Component
Basic ambulatory care and follow-up	Opportunistic prevention and health promotion services
Care of complex problems and follow-up	
Screening/chronic disease prevention	Organized population health promotion targeted at the Primary Care Network population
Well-child care	Screening, parent education and counselling re: infant/child health and development and health promotion

The Review found a large degree of variability in the nature and scope of health promotion activities offered in the PCNs, with five PCNs offering a distinct health promotion program and the other PCNs integrating health promotion within existing programs and services.

The interpretation of "health promotion" differed across the PCNs, ranging from universal programming to services for specific populations of patients. Topics covered included mental health, tobacco cessation, diet, nutrition and weight management, and exercise. Four PCNs offered wellness or mental-health related programming such as happiness-based or stress management classes, or lifestyle coaching. Five PCNs offered tobacco cessation programs that included counselling, educational support and medication management supports. Eight PCNs offered diet, nutrition and weight management classes, or counselling. Six PCNs considered exercise to be a component of health promotion.

PCNs clearly have a large degree of flexibility to meet the unique health needs of the communities they serve. While this may be appropriate, such variability makes comparative analysis difficult.

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There are currently no indicators in place to evaluate the success of health promotion activities of PCNs, in terms of patient experience, improvements in population health, or in value for money.

Furthermore, the health promotion activities of PCNs operate through direct provision by the PCN using grant funding, and through partnerships and linkages with AHS and community groups. There is no systematic method to track current partnerships or linkages. Currently neither Alberta Health nor AHS provide PCNs with direction as to how much PCN resources should be dedicated to health promotion activities, or how much should be accomplished through partnerships and linkages to other organizations.

Complex/chronic care

Currently, in Alberta 30 per cent of Albertans have one or more of seven select chronic health conditions, and among seniors, the prevalence increases to more than 75 per cent.[41] We know that five per cent of Albertans (many of whom have multiple chronic diseases) account for 60 per cent of the costs of emergency department visits, in-patient care, urgent care, and primary care fee-for-service payments to physicians annually. The PHC Strategy emphasized the importance of providing individuals with preventative and chronic disease care through a primary health care provider or team, as evidence shows that in other jurisdictions; such practices result in fewer visits to the emergency room, less hospitalizations, and more patient satisfaction.[42]

The provision of care to individuals with complex and chronic health needs is outlined in the PCN Policy Manual as three distinct service responsibilities: care of complex problems and follow-up, care of chronically ill patients, and screening/chronic disease prevention. Although chronic disease management (CDM) was incorporated into the programming for all of the PCNs, there was wide variability in the way programs were delivered.

Four PCNs offered distinct CDM/complex care service programs, which included weight management programs, diabetes management programs, mental health programs, and medication management programs. Ten PCNs identified having chronic care teams to provide chronic disease management services as part of their core programming. These ten reported having teams of professionals deliver services such as self-managed care, exercise and education programs, screening programs, referrals to specialists, group classes and individual appointments with the appropriate care provider.

Three PCNs distinctly identified use of CDM nurses as part of their core programming to provide front line primary care supports including diabetic medication titration, patient education for Chronic Obstructive Pulmonary Disease (COPD) and home visits for high-risk patients who do not meet the criteria for homecare. Two PCNs identified having CDM care plans as part of their services.

The workforce to deliver CDM/complex care was not consistent among any of the PCNs. Team members could include: registered nurses, licensed practical nurses, behavioural health consultants, dietitians, nurse practitioners, pharmacists, physiotherapists, social workers, kinesiologists, referral coordinators, CDM nurse educators, physicians, and mental health therapists.

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[41] Alberta Health Services. (2010). *2010 2015 Health Plan: Improving Health for All Albertans.* Retrieved from http://www.albertahealthservices.ca/publications/ahs-pub-2010-2015-health-plan.pdf

[42] Alberta Health. (2014). *Alberta's Primary Health Care Strategy* (p.19). Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf

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There was little or no evidence that the community needs assessment conducted by the PCNs (see Section 4.1) was used to determine priority populations requiring specific programming, or to implement programming based on a population-based approach. The PCNs do not appear to have targeted their programming toward priority populations with the highest health needs, and neither the PMO nor AHS seems to have provided standardized support to the PCNs that would result in targeting priority community populations.

Coordination, integration and partnership with other health and social services

The fourth provincial objective of PCNs is to improve the co-ordination of primary care with hospital, long-term and specialty care.

The ideal desired state is a system where people are partners with their health care team, are included in the plan for coordination of their needs, and have their health history and care plan available to all providers through standardized information technology, so that repeat tests are minimized and patients have a more continuous, quality experience.

> In a collaborative environment, providers across programs and services join efforts to provide care. They share ownership over outcomes and they involve multiple providers in caring for individuals.
> – PHC Strategy

The PHC Strategy states that primary health care should be the hub for the coordinated delivery of health care and community and social services; however, the challenges associated with achieving this aim cannot be overlooked. Integration and collaboration across the health system as well as with community and social services is an essential requirement for a collaborative system, leading to greater continuity of care. Ultimately, the objective of care coordination within the health system is to improve population health outcomes, reduce service duplication and reduce unnecessary cost.

Example of coordination of care

One PCN collaborates with an academic institution and with specialists to develop and implement urology referral guidelines, review work flow, and develop strategies to reduce urology referral backlog.

Coordination was highlighted as both a key element of one of the principles of the PHC Strategy, and as one of its fourteen goals. The "continuity of care" principle emphasizes the importance creating a primary health care system that is organized, connected, integrated, and coordinated with other parts of the health care system and with community and social services.

In addition, the third goal of the PHC Strategy was to integrate primary health care services with other parts of the health system and with social and community resources. The PHC Strategy envisions this goal being achieved through partnerships between primary health care and home care, continuing care, public health, acute care, and specialists. The primary health care system may engage providers to act as "brokers" between health services and social and community services.

In this Review, coordination of care activity was found to exist primarily though connections the PCNs established with specialists, with some evidence of coordination with hospitals and mental health services. Evidence of integration with home care and long-term care, community agencies, community addiction teams, or public health was comparatively limited. Evidence shows that a coordinated approach to identify and develop programs based on population health needs, across

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the continuum of care and the lifespan will result in services that are aligned to the population health needs.[43]

Specialty care

Most of the PCNs provided examples of coordination and engagement with specialty physicians, but there was little similarity between their engagement approaches. A number of the PCNs reported offering specialist linkage programs and services with the rationale that this would build greater capacity for specialists to see patients within the community and decrease wait times. For example, PCN CDM nurses in one PCN worked closely with specialists, and in a second PCN, the clinic connected patients with mental health providers, pharmacists, maternity family practices, and obesity clinics. Another model for service coordination was the offering of a specialty clinic in the PCN that provided cardiology, dermatology, general surgery, orthopedic, plastic surgery and pain management services. The rationale for such clinics was reduction in wait times for patients seeking access to specialty care.

Example of collaborative practice

One PCN delivers a respiratory program in partnership with AHS by coordinating the education and exercise components of the program with clinics, managing referrals and testing, taking part in discharge planning meetings, and working more closely with specialists.

A number of the PCNs identified coordination and linkages with AHS within their mental health service offerings. Primary health care-level mental health services are generally considered a Tier 3 service, which, according to the Alberta Health Services Integrated Addiction and Mental Health Service Delivery Framework, means that they provide short-term clinical intervention, support and relapse management. Of the PCNs, eleven offered mental health programming, either as a distinct program or as a component of CDM and maternal health initiatives. Both the nature and delivery of mental health programs varied widely across the PCNs, with the variety of providers ranging from mental health providers, coordinators and therapists to behavioural health consultants, psychologists, psychiatrists and social workers. The PCNs reported partnering with AHS to develop or clarify mental health referral pathways, and build linkages to AHS' addiction and mental health programs.

Example of good practice

Together with AHS, seven Calgary Zone PCNs work together to identify and help solve gaps in the system through specialist linkages with gastroenterologists, web registry, and enhanced hospital discharge.

There were also instances where the PCNs coordinated funding with AHS. For example, one PCN provided AHS half of the funding for a full-time mental health coordinator, who reported to AHS. The PCNs reported that linkages with AHS allowed the PCNs to build teams that included behavioural health consultants, who were hired and trained by AHS and deployed by the PCNs on

[43] McMurchy, D. (2009). *What are the critical attributes and benefits of a high quality primary healthcare system?* Canadian Health Services Research Foundation.

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integrated multidisciplinary teams. While the behavioural health consultants are hired and trained by AHS, their salaries appeared to be paid by the PCN as per the budgets attached to the Business Plan.

According to the Auditor General's report on addiction and mental health[44], there are 139 community based addiction and mental health clinics throughout the province. Some of these clinics are stand-alone while others are co-located within a primary health care clinic or a public health unit. Mental health services offered in the outpatient care are comprised of non-specialized, interdisciplinary teams that provide a full range of interventions and therapies. Both AHS and the PCNs provided similar mental health services, but there was little evidence of a collaborative approach to ensuring the services were effective rather than duplicative, and limited information on how much coordination existed between AHS community-based mental health services and that of the PCNs.

Hospitals

A few of the PCNs had initiatives for coordinated hospital discharge planning. Some examples included provision of a pharmacist intervention for complex, high-risk patients, and screening or home visits for frail senior patients who were at high risk due to multiple medications and chronic conditions. One PCN reported participating in a project with other PCNs in the same zone to ensure linkages were in place for unattached patients discharged from the hospital.

Example of coordination of care

One urban PCN located an administrative clerk at local hospitals to expedite transfer of discharge summaries to PCN physicians, enabling timely and informative follow-ups on their post-discharge patients.

While a number of the PCNs reported working closely with their local community hospitals, there were limited specifics with regard to the actual processes and initiatives in place, and more information is required to determine the outcomes and success of such coordination.

Seniors care

There were few instances of the PCNs collaborating with continuing care. Where such initiatives existed, it is unclear why this work is undertaken by the PCN rather than AHS. For example, one urban PCN engaged a multidisciplinary team consisting of a geriatric nurse practitioner, pharmacist and social worker that visits homebound patients aged 75 and older in their homes and provide intensive case management. This PCN reported collaboration with AHS Home Care, but no details were provided about how the services were coordinated. As AHS homecare services also offer case management and nursing support, it is unclear whether this is a duplication of service. An evaluation of the program is currently in development, but aims to evaluate utilization, demand, and patient and physician satisfaction with the program, rather than program outcomes.

A few of the PCNs identified challenges and opportunities for improving collaboration with home care and long term care, however, the PCNs more commonly identified re-alignment of resources across hospital and primary health care as a factor that would allow seniors to age in place and receive better care. The opportunity to align services across AHS community-based services and PCNs is not generally identified as a necessary step to achieving better outcomes for seniors.

[44] Auditor General Alberta. (2012). *Report of the Auditor General of Alberta.* Retrieved from http://www.oag.ab.ca/webfiles/reports/OAGJuly2012report.pdf

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Currently, determining services provided and resources required (such as the number of unique patients by PCN, the number of visits, visits by type of service received, costs per visit, number of Primary Care Network patients attending to other providers, etc.) cannot be determined in real time – retrospective evaluations, including the consolidation of multiple PCN reports, are the current standard method.

Inter-professional teams

The fifth and final provincial objective of PCNs is to facilitate greater use of multi-disciplinary teams in primary health care.

The primary health care workforce – including health, social and community-based programs, service providers and administrators – form the foundation of primary health care delivery. To deliver quality care, it is essential to ensure appropriate providers are available and that they have necessary supports. Workforce planning must take into account the shifts in how primary health care is delivered.[45]

For the purposes of this Review, "physician panel" is defined as "the formalized linkage and long-term, ongoing relationship between a primary care physician to a provider and his/her patients", while "panel size" is the number of individual patients under the care of a specific provider[46]. The term "enrollees" refers to those who are identified using a four-cut method that identifies all patients who have received any service from a family physician over the past 36 months, and informally assigns the patient to a physician. All of the patients assigned to all of the physicians in the PCN make up the PCN enrollee list.[47]

Ideal physician panel size

The College of Family Physicians of Canada offers several formulas for generating physician panel sizes.[48] However, there is little available evidence to assist in determining ideal physician panel size. The panel size appropriate for an individual physician depends on several factors, such as how often the physician is in the office, the risk associated with caring for the specific panel of patients and the physician's scope of practice. Each environment is different, but the panel size for a full-time family physician in a mature system can be up to about 2,500.[49]

There is some limited evidence of ideal physician panel sizes in the literature. For example:

- In the United Kingdom, practices have grown from an average size of 5,726 patients in 2000 to 6,610 patients in 2010, with the proportion of solo practices falling from 22.8 per cent to 14.5 per cent and the average patient panel per family physician falling from 1,795 to 1,567 over the same period.[50]
- The target patient panel for primary care providers in Ontario's Family Health Teams is 1,300 patients, assuming a 40-hour work week.[51]

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[45] Alberta Health. (2014). *Alberta's Primary Health Care Strategy*. Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf

[46] College of Family Physicians of Canada. (2012). *Best Advice – Panel Size*, September 2012, p. 1. Retrieved from http://www.cfpc.ca/Best_Advice_Panel_Size/

[47] Alberta Medical Association. (2013). PCN Evolution Vision and Framework Report to the Minister of Health (p. 34), Primary Care Alliance Board

[48] College of Family Physicians of Canada. (2012). *Best Advice – Panel Size*, September 2012, Appendix A, p. 11

[49] Murray, M. & Tantau, C.. (2000). Same-day appointments: exploding the access paradigm. *Fam Pract Manag7*(45–50).

[50] Roland, M., Guthrie, B., & Thome, D.C.. (2012). Primary medical care in the United Kingdom. *Journal of the American Board of Family Medicine, Vol. 25*, Supplement S6

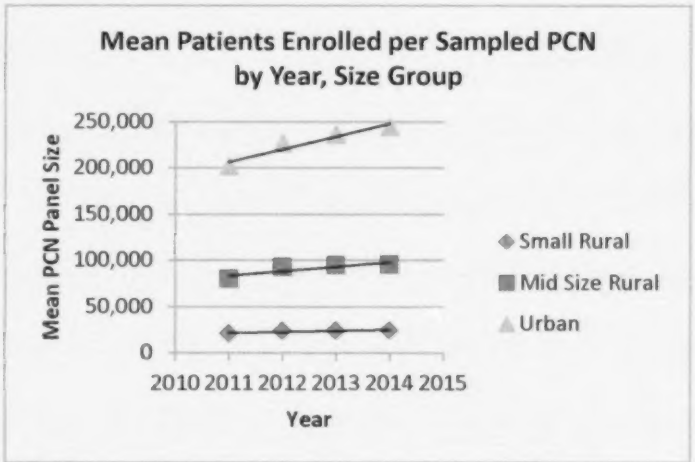
[51] McMaster University, Ryerson University. (2015). Benchmarking for Nurse Practitioner Patient Panel Size and Comparative Analysis of Nurse Practitioner Pay Scales: Update of a Scoping Review.

- In Denmark, family physicians are responsible for serving the patients on their list, which averages 1,561 patients.[52]
- One study recommended a physician panel size range of 983 to 1,947 when a supporting team of other health care providers is available, with larger panel sizes possible when there are more non-physician team members.[53]

Patients assigned per PCN

Analysis of the panel size information available for the 13 PCNs showed that the number of PCN enrollees increased over the past four years.

The urban PCN enrollees increased at the fastest rate in comparison to the small-sized and mid-sized rural PCNs. On average, the urban PCN enrollees increased by 13,815 patients from year to year, the mid-sized rural PCNs by 4,808 patients, and the small-sized rural PCNs by 1,116 patients.



Physician panel sizes

The following analyses are based on data extracted from the 13 PCNs' annual reports from 2010/2011 to 2013/2014. The number of physicians in each PCN, adjusted by full time equivalents (FTE), includes general practitioners, pediatricians and nurse practitioners.[54]

Mean Patient Panel Size per Adjusted Physician FTE by Sampled PCN Size Group					
PCN Size Group	**2010/2011**	**2011/2012**	**2012/2013**	**2013/2014**	**Average**
Small-Sized Rural (n = 4)	968.7	985.4	1005.4	992.3	987.9
Mid-Sized Rural (n = 4)	1195.0	1176.3	1192.0	1182.0	1186.3
Urban (n = 5)	1195.5	1166.4	1152.1	1138.1	1163.0

Table 1: Mean physician panel size per adjusted physician FTE by PCN size group and year

[52] Pedersen, K.M., Andersen, J.S., & Sondergaard, J.. (2012). *General practice and primary health care in Denmark. Journal of the American Board of Family Medicine, Vol. 25*, Supplement S34

[53] Altschuler, J., Margolius, D., Bodenheimer, T. & Grumbach, K. (2012). Estimating a reasonable patient panel size for primary care physicians with team-based task delegation. *Annals Journal Club 10*(5), 396-400.

[54] The physician FTE calculation is based on the 1984 Health Canada methodology (also used in the Alberta Health Statistical Supplement 2015, Table 2.12), adjusted to include ARP payments in addition to the fee-for-service payments. Each physician who had claims in a given year is first assigned an overall FTE based on comparisons with payment benchmarks. The physician FTE number is then partitioned proportionally among different PCNs/non-PCN, by associating the provider's claims with different PCNs/Non-PCN. PCN panel size (i.e. total number enrollees) is then divided by the PCN FTE (sum of PCN FTE portions over all physicians per PCN) to obtain the PCN panel size per FTE. These calculations are done separately for each fiscal year.

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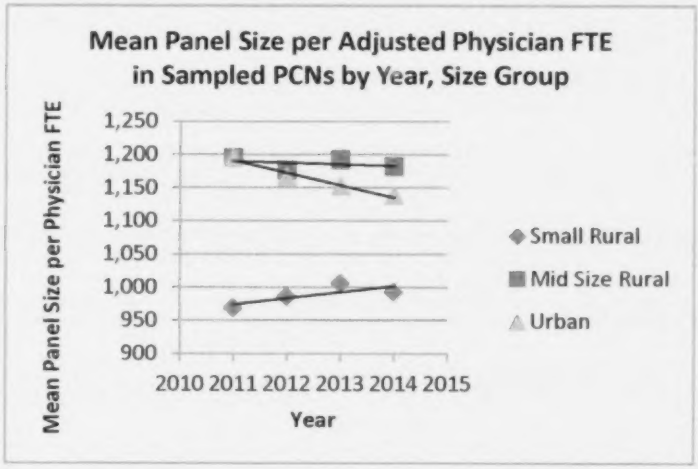
Rural PCNs have experienced fairly stable physician FTE panel sizes, with a minor increase in small-sized rural PCNs and a minor decrease in mid-sized rural PCNs from 2010/2011 to 2013/2014. Mid-sized rural PCNs had the largest physician FTE panel sizes, with a mean panel size of 1182 in 2013/2014 (see Table 1).

Urban PCNs have experienced steady decreases in physician FTE panel sizes from 2010/2011 to 2013/2014, despite the largest growth in PCN enrollee numbers during the time period.

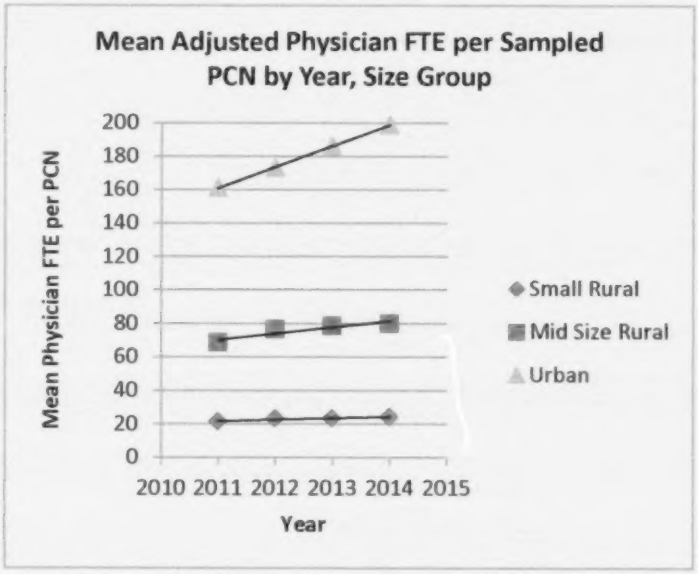


Number of physicians per PCN

There was an increase in the number of physicians in the PCNs over the four years.

On average, the number of physicians in the urban PCNs increased the most compared to the mid-sized and small-sized rural PCNs.

The lack of growth in physician FTE panel sizes year over year suggests that the increased number of physician FTEs in the PCNs has not directly translated into increased PCN enrollees, especially for urban PCNs, where the increased number of physicians seems to have rather resulted in a reduction of physician panel sizes.



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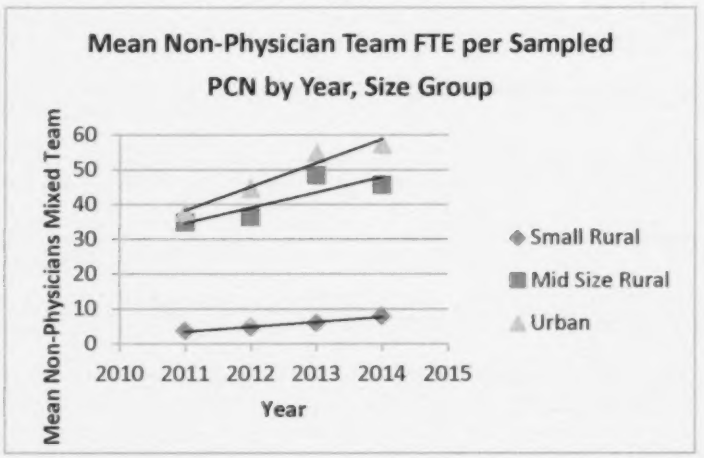
Non-physician team FTE

There was also an overall increase in non-physician team members.[55]

On average, non-physicians team sizes in the urban PCNs increased at the fastest rate (by seven non-physician members annually), compared to the mid-sized rural PCNs (with an increase of 4 non-physician members annually) and the small-sized rural PCNs (with an increase of one non-physician member annually).

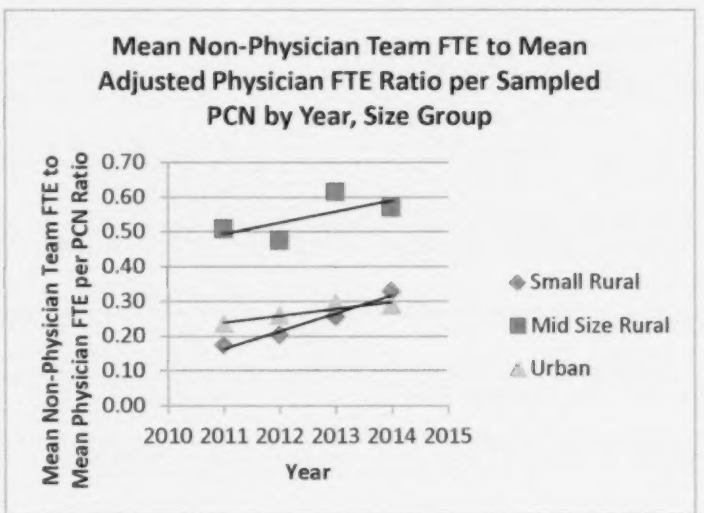


Non-physician team to physician ratio

Interdisciplinary teams of providers may produce better health outcomes superior to those achieved by "usual care" arrangements, with many studies evaluating the addition of nurses, social workers, psychologists, and clinical pharmacists to teams.[56] These effective care teams including nurses, other health professionals and practice support staff can enable the practice to provide a greater scope of comprehensive care services, increased patient visits, allow a larger caseload, and enable the family physician to better manage administrative and clinical work by delegating responsibilities to the most appropriate health care professional. A multidisciplinary system has been shown to be effective because family physicians have a more coordinated and consultative role that can work to enhance panel size.[57]

Effective primary health care teams tend to have ratios of 3–4 non-physicians to 1 physician.[58] In 2013/2014, the mean non-physician FTE to physician FTE ratio was as follows:

- 0.33 for the small-sized rural PCNs,
- 0.57 for the mid-sized rural PCNs, and
- 0.29 for the urban PCNs.



[55] Note: These data do not differentiate between clinical and non-clinical non-physician members.
[56] Grumbach, K., & Bodenheimer, T. (2004). Can health care teams improve primary care practice? *JAMA, 291*(10), 1246-1251.
[57] College of Family Physicians of Canada. (2012). *Best Advice – Panel Size.* Retrieved from http://www.cfpc.ca/Best_Advice_Panel_Size/
[58] Auditor General of Alberta. (2014). *Report on Chronic Disease Management.* Retrieved from http://www.oag.ab.ca/webfiles/reports/OAGSept2014Report.pdf

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This analysis is based on the number of non-physician team members who are paid through PCN funding. An important limitation is that statistics are not available that include non-physician team members who are hired directly by individual family physicians or clinics, or inter-disciplinary team members who are hired by AHS, but work in PCNs. The actual non-physician to physician team ratio could, therefore, be higher.

There is a moderately strong positive relationship between non-physician team size and the number of physicians in a PCN, meaning that as the number of physicians increase in a PCN so does the team size. However, none of the PCNs had achieved even a one-to-one ratio for non-physician team members to physicians. In addition, the relationship to the patient and to care provision is unknown. For example, it is unclear if there are more team members who do basic procedures in tandem with the physician, or if there are more autonomous practitioners that are able to deliver services independent of the physician.

The average non-physician FTE to physician FTE ratios had upward trends for all of the PCN size groups, although this increase was smaller for the urban PCNs.

On average, the mid-sized rural PCNs' non-physician to physician ratio is higher compared to the small-sized rural and urban PCNs. Otherwise, there was no correlation found between PCN size (based on either panel size or number of physicians) and the structure of its physician to team ratio. These ratios continue to be significantly lower than what is suggested in the literature as best practice for primary health care.

> "One of the nurse practitioners has her own panel, but she has to shadow bill under one of the physicians and if her patients go to the medical clinic, then they are no longer counted as part of the PCN's panel; it's not clear why a nurse cannot have his/her own billing number/panel." – PCN

Discussion

The PCN Policy Manual does not provide panel size guidelines, nor does it indicate the ideal composition or size of a multidisciplinary team. Not surprisingly, there was a large degree of variability in both the type of provider and number of FTEs within the non-physician teams across the PCNs. Most of the PCNs were found to use nurses (RNs predominantly) in physicians' offices to assist with screening and minor procedures, to recall patients for critical lab results or changes in medication, and to provide self-management education for chronic or complex patients.

There are also gaps within policy at the PCN level regarding team structure. For example, the majority of the PCNs did not have job descriptions for their staff roles, or guidelines for remuneration for PCN staff. This lack of policy potentially impacts performance monitoring and could create salary inequities. Moreover, "the lack of proper communication [outlining roles and responsibilities] can result in unfulfilled expectations that team members have of one another."[59] The lack of standardization in remuneration may lead to variation in value for public dollars invested in PCNs. Administrative Leads were found to have the most variation in remuneration across the PCNs.

AHS does, on a limited basis, share administrative staff, if available; however, all of the PCNs indicated that they have not paid AHS for any services and there is minimal evidence of the PCNs

[59] Wranik, D., Hanrahan, K., & Tarrant, F. (2012). *Contractual arrangements and remuneration methods for interdisciplinary teams in primary health care in public payer systems: A framework.*, 2012, p. 14

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using AHS services other than mental health, occasional administrative staff or obstetrical nurses. The rural PCNs were found to be more likely to rely on AHS for shared services due to limited availability of resources (such as to access respiratory technologists, mental health practitioners and dieticians). In such cases, the PCNs bill for the specialist visiting the clinic and seeing patients and then subtract 30–40 per cent for use of PCN administrative resources (overhead).

The Review has shown that for the PCNs, enrollee numbers are growing while individual physician panel sizes are exhibiting little growth, if not decreasing. The literature has shown that with an appropriate non-physician supporting team, panel sizes could theoretically be much higher than current levels, particularly in the urban PCNs.

PCN priority programming

In collecting information on programs from the sources described in the methods, it was clear that the format for reporting program types and for which patients is not consistent. Research and policy literature confirms that ambulatory care and follow-up, chronic disease prevention and management, addiction, mental health and geriatric services, and maternal and infant health services are core to primary health care, and this Review generally found the PCNs to be targeting these areas. For example:

- Twelve of the PCNs offered some form of chronic disease management or complex care programming.
- Twelve of the PCNs offered some form of diet, nutrition, or weight management programming.
- Eleven of the PCNs offered mental health programming.
- Half of the PCNs offered health promotion programming distinct from other initiatives (such as CDM or maternal health programming).
- Four of the PCNs offered some form of physician support services, which could include office efficiency supports, panel identification and maintenance, and PCN initiatives.
- Two of the PCNs offered some form of attachment services.

However, there was a large degree of variability found within these service responsibility areas in terms of what types of services were offered and for whom (e.g., universal screening versus programming targeted to high needs populations). Variability in programming may in part be due to the fact that PCNs are expected to create programming that meets the needs of their specific community. However, other factors such as lack of methodical population needs assessment, varied and limited evaluation measures, lack of clear direction from Alberta Health, limited collaboration with AHS, and ineffective support from the PMO with regard to standardization are also involved. These issues are explored in the subsequent chapters of this report.

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7. Evaluation and performance measures

In a high performing primary health care system, there is systematic, ongoing performance measurement at multiple levels (practice, organization, regional and provincial). In addition, program evaluation and evaluation of innovations is incorporated into the planning cycle. Finally in top performing primary health care systems there is capacity for research to allow for continuous learning and evolution.[60] In Alberta, there are emerging strategies in place for performance measurement, and some pockets of program and innovation evaluation, but limited or no capacity for research.

In addition to performance monitoring and evaluation, high performing systems invest in information technology that supports clinical practice and decision support at the patient level, enables performance monitoring, and provides useful data for evaluation and research.[61] Although the Review did not include information technology, some feedback was provided by the PCNs in interviews and during site visits.

Performance and evaluation measures

Comprehensive evaluation including formative and summative evaluation was contemplated at the commencement of the Primary Care Initiative. Formal evaluation of PCNs, conducted on behalf of the Primary Care Initiative Evaluation Advisory Committee was completed in 2010[62] with the final report issued April 29, 2011. The 'focus of the evaluation was to establish whether PCNs represented a better model of primary care as compared to the model that was in place in Alberta prior to the introduction of the PCI[63]'. The study was limited by a lack of complete and comparable data.

Alberta's Office of the Auditor General (OAG) conducted an audit in 2012 to determine whether Alberta Health had systems in place to demonstrate the value that Albertans are receiving from the investment in PCNs. They found significant weaknesses in the design and implementation of the accountability systems, and recommended that Alberta Health strengthen evaluation to improve reporting on the success and the cost-effectiveness of the PCN program. The specific recommendations include:

- Establish clear expectations and targets for PCN program objectives;
- Develop systems to evaluate and report performance of the PCN program; and
- Improve its systems to provide information and support that the PCNs and AHS need to achieve program objectives.[64]

Alberta Health responded to the need for structure and consistency by contracting for the development of a Primary Health Care Evaluation Framework in 2012. The Framework and logic model were publicly released in 2013.[65] The logic model (see Appendix B) frames Alberta's primary health care system as a whole and details its components at the system and delivery site levels. The

[60] Aggarwat, M. & Hutchinson, B. (2012). *Toward a Primary Care Strategy for Canada.* Ottawa, ON: Canadian Foundation for Healthcare Improvement.
[61] Aggarwat, M. & Hutchinson, B. (2012). *Toward a Primary Care Strategy for Canada.* Ottawa, ON: Canadian Foundation for Healthcare Improvement.
[62] Auditor General of Alberta. (2012). *Report of the Auditor General of Alberta.* Retrieved from http://www.oag.ab.ca/webfiles/reports/OAGJuly2012report.pdf
[63] R. A. Malatest & Associates Ltd. (2011). Primary Care Initiative evaluation: Final summative evaluation technical report.
[64] Auditor General of Alberta. (2012). *Report of the Auditor General of Alberta* (p.25). Retrieved from http://www.oag.ab.ca/webfiles/reports/OAGJuly2012report.pdf
[65] Alberta Health. (2013). Primary Health Care Evaluation Framework. Government of Alberta. Edmonton, AB.

Framework outlines major evaluation activities that support a relatively comprehensive approach to evaluation including performance monitoring, applied evaluation and independent formal evaluation.

The PHC Strategy released in early 2014[66] also links the desired outcomes and outputs to the goal of evaluating effectiveness. Measurement and evaluation activities will support continuous improvement, measure effectiveness, measure effectiveness, improve quality of care and inform best practices.

The Measurement and Evaluation Working Group (MEWG) was formed in 2014 to support the PHC Strategy and implementation of the Framework by providing recommendations and advice relating to performance measurement and evaluation activities that focus on improving quality and outcomes.

Consistent with the performance measurement activity detailed in the Framework and in response to recommendations from the OAG, system-level indicators have been developed to improve accountability and support process improvement. Stakeholder input and feedback was integral to the selection of the indicators and will continue as the indicators are further defined and implemented to support efficient and consistent implementation. The requirement to report on these indicators, now referred to as the PHC Indicator Set, was added to the latest PCN grant agreements (Schedule B).

MEWG is setting up task groups to build toolkits to refine the definitions of the PHC Indicator Set, and to develop standardized measurement and reporting methods. Members of the task groups will provide perspective based on their expertise and experience in measurement and evaluation, clinical practice and administration.

Alberta Health currently requires reporting of the progress towards indicator reporting with full reporting in the 2017/2018 fiscal year. The PCNs have documented progress towards reporting in the 2014/2015 Annual Reports, including steps they have taken to comply along with any barriers they have encountered.

Evaluation activities are supported by the PMO. In addition, AHS supports a community of practice working group for evaluators, and staff from many of the PCNs participate in this forum.

There is no comprehensive inventory of performance measurement and evaluation activities in Alberta at the present time. Scans of measurement activities and evaluations are contemplated in the near future.

It was determined that some of the PCNs track patient encounters in support of analysis and improvement. Several of the PCNs have developed frameworks to measure outputs and other indicators of ongoing service level or disease level evaluations.

> "The PCNs as whole are a large organization that needs to begin maximizing on its economies of scale."
> – PCN

The mid-sized PCNs reported that there is a need to revisit the approach PCNs use to develop and measure programs, indicating that they need better measureable short-term and medium-term indicators for population health outcomes. With the current health status measures, the PCNs find it difficult to link to current programs and services to outcomes.

[66] Alberta Health. (2014). *Alberta's Primary Health Care Strategy*. Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf

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Generally, it is difficult to assess whether and to what extent PCNs are effective in realizing primary health care outcomes given the limited performance management systems for primary health care in the province and the challenges associated with tracking outcomes versus outputs.

Some of the PCNs reported that they do not believe the current Schedule B measures are feasible or useful (for Alberta Health or PCNs). One PCN commented that implementation of the newly introduced Schedule B indicators might risk PCN engagement with their respective physicians.

Economies of scale

Many of the PCNs suggested introducing centralized spending for evaluation to help the government achieve some economies of scale. With greater knowledge of best practice models, PCNs could engage in more efficient office management and more robust and consistent data collection. Furthermore, greater collaboration between PCNs could lead to data input into mineable databases and best practice promotion and adherence. Each of the PCNs was found to function separately in these regards.

This is supported by the fact that one rural PCN did not spend any money on evaluation as it thought it was more important to allocate funding to programs, while another rural PCN spent $33,500 on consultants to help it develop an evaluation framework, and a third PCN invested $200,000 on developing evaluation measures. Common approaches, methodologies, and priorities in performance measurement and evaluation work in the PCNs were not found at this time, illustrating the need to continue with provincial initiatives in reporting on a standard PHC Indicator Set and the need to add more structure and definition to PCN business reporting (business plans and annual reports).

Information technology

The PCNs also identified a need for greater support for common approaches to evaluation and data-sharing. Primary health care has an integral role to play in terms of data-sharing and implementation of a single electronic medical record (EMR) for each Albertan. EMRs are a critical enabler for a health home by ensuring individuals and primary health care providers have access to necessary information when and where it is needed. The EMR also allows relevant information to be shared effectively with other providers and sectors (PHC Strategy).

> "PIN, Meditech, Netcare [and] EMRs should all be streamlined for better patient care." – PCN

The *Health Information Act* contains important provisions about how information must be handled, but it also places limits on information-sharing within the health system and with social service providers. Features of a good a primary health care system includes information systems that support appropriate patient and system-level electronic information flow for planning, delivery and evaluation.

Many of the PCNs suggested that more standardization of evaluation, data-sharing agreements, etc. would allow for improved planning and service delivery.

> PCNs being recognized as custodians...would facilitate patient care, and data-sharing and measurement...We need a solution to partner with AHS to share data such as tracking a patient's journey in the health care system or provide data for quality improvement." – PCN

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Example of good practice

One PCN developed a central data repository that "integrates clinic EMR and utilization data from Alberta Health and AHS." The PCN reports that the "enhanced functionality will allow...primary care physicians to understand the system utilization of their panelled patients, i.e., if particular patients are transitioning into complex high need/frequent users."

Currently the business plan and annual report templates do not reflect common terminology, nor do they capture all information required for Alberta Health to evaluate PCNs' performance. The lack of standardization and use of common terminology decreases consistency in reporting on program objectives and limits accountability and transparency of PCN performance.

There was little evidence of identification and implementation of best practices for evaluation frameworks to enhance accountability, increase sharing of best practices, or encourage collaboration across PCNs.

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8. Roles and relationships

The PHC Strategy states that "parts of the health system may not communicate well with each other – social factors that affect an individual's health – may depend on a health care provider's knowledge and capacity to make a referral."[67] The PHC Strategy called for greater focus on addressing such gaps by developing understanding of the social determinants of health, and involving other health sectors and the community within the planning and delivery of primary health care services. In addition, high performing health systems have mechanisms in place to align care and delivery with population needs.

This chapter provides an overview of the integrative nature of primary health care service delivery in Alberta by examining the relationships between the 13 PCNs and the key stakeholders of primary health care service delivery: Alberta Health, AHS and community partners. Included is a review and analysis of the mechanisms that the PCNs use to determine their population health needs.

Alberta Health Services

The PCNs reported relationships with AHS ranging from excellent to requiring significant improvement. The majority of the PCNs felt that relationships with AHS needed refreshing, including clarity of role identification and clear delineation of primary health care delivery responsibilities between PCNs and AHS.

In general, the urban PCNs reported having better collaboration with AHS than the rural PCNs. They saw value in their ongoing relationship with AHS at the zone level through home care, determining the care pathways from the patient perspective and breaking down barriers to continuity of care within community, primary, secondary, and tertiary health services. Through this relationship, the PCNs saw that they were able to eliminate duplication and strengthen learning opportunities for best practices. Building on this partnership, the PCNs in urban areas envision better continuity of care and integration.

> "AHS governance members are constantly changing and it's hard to get decisions from AHS." – PCN

> One PCN reported that while they request AHS members who have community experience, they "end up getting members from urban centers who do not understand the challenges of a rural PCN." – PCN

Despite their positive outlook, the urban PCNs indicated the need for a better relationship with AHS in areas such as partnership for data-sharing (such as tracking a patient's journey in the health care system or providing data for quality improvement).

Some of the mid-sized rural and small-sized rural PCNs also indicated that they have a good relationship with the local AHS primary care leads, but generally felt that they have little contact with their provincial team member. Some of the mid-sized and small-sized rural PCNs perceived AHS as having too many competing and conflicting responsibilities that hindered the delivery of primary health care.

[67] Alberta Health. (2014). *Alberta's Primary Health Care Strategy* (p. 4). Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf

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AHS was generally perceived by the PCNs as lacking the design to effectively deliver primary health care, in terms of orientation toward the community. Some of the PCNs commented that AHS programming is too institutionalized, packaged or delivered in a top-down fashion.

The majority of the PCNs brought up their relationship with AHS Board Members. In terms of governance some of the PCNs, especially the rural PCNs, felt that AHS was not sending individuals with the appropriate experience and decision-making power to the Board meetings. Many of the PCNs expressed frustration at the number of times their AHS board members changed.

The PCNs felt that improvement in population health outcomes could be achieved with better relationships and greater coordination with the health programs run by AHS. The PCNs see such coordination as a means to reduce overlap of services and to achieve better health outcomes, and suggested that improved relationships could help linkages with hospitals and urgent care centres to improve the reintegration of patients following emergency room or inpatients admissions.

> "PCNs and primary care providers want to improve, but…require the system to support…Activity and expectations are revised as a result of the [OAG PCN] report, but priorities, policies, processes and templates are not revised to support improvement …Negotiations with the AMA should not impact PCNs." – PCN

Alberta Health

When asked about how Alberta Health could improve current primary health care policies and processes, the mid-sized PCNs highlighted that the PCNs have a good relationship will Alberta Health, but requested greater collaboration and communication.

The small-sized rural PCNs reported inconsistent and less frequent communication between the PCNs and Alberta Health. Due to this limited communication between the funded and the funding agencies, the PCNs stated that the PMO could have played a role in this gap. The small-sized rural PCNs expressed that they feel caught in between Alberta Health and AHS, and perceived that there was little communication or coordination happening between the two organizations. Therefore, they recommended clearer communication and greater coordination between Alberta Health, AHS, and the PCNs.

Similar to the mid-sized and small-sized rural PCNs, the urban PCNs stated that Alberta Health should provide clear policy and process guidelines for the PCNs. For example, the majority stated that the current templates and timelines are not appropriate for the PCNs' business plan development and implementation. The urban PCNs report that the current relationship between the PCNs and Alberta Health need a significant improvement in transparency, clarity on outcomes sought, policies and metrics developed.

Program Management Office (PMO)

The PMO assists in the preparation and completion of required PCN documentation. The PMO also provides support to PCNs to assist with operational and program planning. This support leverages collaboration with a number of programs that are consistent with the PHC Strategy. In the 2014/2015 fiscal year, $2,972,500 was allocated in grant funding from Alberta Health to the AMA for the PMO.

The PMO support to PCNs includes supporting PCNs in preparing documents, such as business plans and reports. However, the PMO reported that their role with regard to business plans and

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reports is not clear. The PMO reported that PCNs do not always send their documentation to the PMO, nor do PCNs always incorporate PMO suggestions, as these are not requirements for the PCNs.

With regard to the coordination of the PCNs' work, PMO reported that they used to meet monthly with Alberta Health to discuss issues and determine solutions, and felt that these meetings enabled consistent communication of issues from the PCNs to Alberta Health. However, the PMO reported these regular meetings had been discontinued.

Alberta Health staff reported that on many occasions they would ask questions of the PCNs that they felt should have been caught by the PMO, but were not, either because PCNs had not involved the PMO in their business planning processes or they had ignored PMO feedback.

The PCNs stated that there was a lack of role clarity between the PMO and Alberta Health in supporting the PCNs, and they recommended that the purpose and role of the PMO should be clarified.

Functions of the PCN Program Management Office:

PCN Business Plan:
- Assist with preparation and completion of required documentation
- Support PCNs to assist with operational and program planning

Communications:
- Support the delivery of communications for PCN initiatives
- Support knowledge transfer, including workshops, educational forums and resource materials for PCNs

Evaluation:
- Assist PCN performance monitoring and reporting
- Provide support with quality improvement planning

Project Management (Evolution):
- Provide feedback and recommendation to Alberta Health regarding PCN policy, initiatives
- Assist PCNs with PCN Evolution initiatives, monitoring and reporting, as well as PCN development and operations

Some of the PCNs raised the question of whether the PMO should be part of the AMA given their role in supporting primary health care. An example provided is that the PMO Program Director reports to the Assistant Executive Director at AMA. As the PMO is meant to provide support services to PCNs rather than physicians, having the PMO as part of the AMA could be perceived as a lack of independence of the Program Director from the main body representing physicians.

Review of the PMO expenses did not reveal any expenses that were outside the terms of the signed grant agreement. However, many overhead costs are allocated from the AMA to the PMO—for example, HR time, rent, accounting staff, IT staff, and software costs.

Needs assessment and engaging with communities

Communities have a profound influence on individuals' overall health and well-being. Involving the community in planning and delivering services has been shown to strengthen the primary health care system. An ongoing dialogue with a community, as well as systematic ways to evaluate community need, can lead to services that meet

"The success and effectiveness of PCNs and community organizations is their ability to adapt to the needs of the community." – PCN

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local needs, ensuring that unmet needs are identified and addressed. Building a person-centred system also requires more meaningful citizen involvement in health system design. Soliciting and incorporating people's feedback on care planning and service design can help providers better understand what matters to individuals beyond the care itself (including non-clinical components like staff friendliness or accessibility of service). This understanding will, in turn, ensure that services better match what individuals need.

"We support community organizations in our area, by providing access to our centralized services and by co-locating care team members within Community Health Centres." – PCN

Co-ordination at a geographic level is needed to meet local community health needs, and at the provincial level to ensure that there is consistency in services for Albertans across the province.[68] Evaluated models of primary health care delivery that have been shown to have the best patient outcomes often have a high degree of community involvement in determining population needs and resulting programming.[69]

The PCNs face a variety of challenges in identifying the primary health care needs of the populations they serve. The PCNs that had a methodological approach to community needs identification were in the minority: generally, there is was a lack of standardization in how the PCNs approach identification of the primary health care needs of their communities.

Some of the PCNs incorporated patient engagement consultation, receiving feedback directly from the community at community events and town councils, or via interviews with community stakeholders, including Members of the Legislative Assembly (MLAs). Some of the PCNs also used quantitative sources such as census data, data collected by the Health Quality Council of Alberta (HQCA) and population health reports obtained from AHS.

Varying Approaches:

- Patient surveys
- Evaluation results
- Physician surveys, suggestions
- HQCA
- Community stakeholder interviews
- Discussions with AHS and other stakeholders
- Community profiles

The PCNs reported receiving information through conversations with stakeholders, such as AHS, service agencies, town councils, and community groups about service gaps. Most often, the PCNs reported less rigorous approaches such as receiving ad hoc suggestions for programming from member physicians or staff. One PCN reported obtaining feedback through small group dinners with members.

For the majority of the PCNs, there did not appear to be an overarching strategy with regard to either data collection or analysis. This Review validated the finding that population health data, including the community profiles located on the Alberta Health website, were not a main source for identification of primary health care service gaps for program planning and development. During interviews, it was indicated that input from member family physicians and patient surveys held more

[68] Alberta Health. (2014). *Alberta's Primary Health Care Strategy*. Retrieved from http://www.health.alberta.ca/documents/Primary-Health-Care-Strategy-2014.pdf

[69] Pomerantz, A.S., Shiner, B., Watts, B.V., Detzer, M.J., Kutter, C., Street, B., Scott, D. (2010). The White River model of colocated collaborative care: A platform for mental and behavioral health care in the medical home. *Families, Systems and Health, 28*(2),114-129.

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weight than more rigorous sources when choosing appropriate primary health care programs to offer. Furthermore, it was found that the majority of the PCNs had the same programs in place since their start-up. Although input from providers and current patients is important, these sources may miss community health needs of the community where Albertans have primary health care needs, but are unable to or choose not to access PCN services.

> "Knowing who the patients are and their needs allows us to develop programs to meet their needs, thereby creating the most effective access to primary health care." – PCN

While the PCNs interpret the size and scope of their communities differently, most of the mid-sized rural PCNs interpret their "community" as being comprised of their patients, rather than the total community from which their patients reside. Engagement with patients is predominantly done through surveys and questionnaires that are program specific. The mid-sized and small-sized rural PCNs generally had not developed community engagement plans or partnerships with other community-based programs as part of their community engagement activities.

Some of the mid-sized PCNs asked for greater clarity and guidance on the mandate of the PCNs. They also suggested that the role of the community in the PCNs should be clarified. For this to happen, some of the PCNs suggested that funding should be available to local organizations.

The small-sized rural PCNs reported that relationships with communities have been developed through engagement with the town councils, MLAs and other community groups. Through this engagement with community groups, the PCNs claim to have gained an understanding of the health care needs of the community. In the current arrangements, the PCNs believe that there is little understanding of the work of the PCNs within the communities, and this lack of awareness is an area the PCNs are trying to address.

> "There would be benefits to enhance the connection between primary care and social service programs. There are missed opportunities regarding services available to patients, families and communities, as multidisciplinary teams' awareness and expertise regarding availability of services is often limited." – PCN

There was little evidence to show that the PMO, as a support office, or AHS, as a joint venture partner, were providing consistent and standardized ways for the PCNs to collect information about community primary health care needs or to incorporate available information into their business planning processes.

The PCNs identified the need for a standardized approach to assessments in primary health care service gap identification, as requests were voiced for greater and more "transparent information" such as a "robust community needs assessment."

Data discrepancies

Regardless of their approach, the community health data available to PCNs has a number of challenges. For example, while Alberta Health's primary health care community profiles offer extensive information on community health needs, the profiles have been based on the 132 Local Geographical Areas (LGAs) from the five AHS zones. The boundaries of these LGAs do not align easily to the communities served by the PCNs, as identified in the PCN business plans.

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While the communities served by a rural PCN may fall within one LGA (and thus one community profile data set), the communities served by some urban or mid-sized PCNS may extend across a number of distinct LGAs, and thus, many distinct community profile data sets. In other cases, a PCN may only serve some, and not all, of the communities included in an LGA. Such discrepancies in the geographical boundaries of the available data have made valuable analysis of the associated community profile data quite difficult.

In 2015, 42 community profiles were developed by Alberta Health to coincide with the communities served by each PCN, suggesting some remediation of data challenges; however, these were not available to PCNs or AHS at the time of the Review. [70]

The PCNs identified additional barriers for data collection such as the variety of electronic medical records (EMRs) in use across the PCNs. There was a general lack of education and training by vendors of the EMR systems to staff of the PCNs. In addition, complicated data-sharing agreements between the PCN and their member clinics further hindered their ability to identify population-based primary health care needs. There is a lack of clarity and guidance in PCN policies and guidelines regarding population health needs assessment data collection processes (such as the PCN Policy Manual and business plan guideline).

[70] The PCNs have access to these 42 community profiles as of August 2015, but they would not have had access to them for the time period of this Review.

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9. Conclusions

The main finding of the Review is that there is a great deal of variability in both service and financial practices across the sampled PCNs. For example:

- The PCNs are all targeting the five provincial objectives.
- There is little evidence that the PCNs assess community health needs in a methodical manner to match their programs with community needs, allocate resources for priority areas, and evaluate to ensure results are aligned with objectives.
- There were instances where the PCN Administrative Leads were receiving remuneration that was higher than the guidelines provided and where the appropriateness of PCN spending for physician compensation was not clear.
- The Review found instances where PCNs were using public dollars on expenditures that were inappropriate.

The Review also identified a number of relational and policy-related issues between the PCNs and the key stakeholders of Primary Health Care service delivery: the PMO, AHS, and Alberta Health. For example:

- The PMO is not providing consistent support for the PCNs to standardize in these areas.
- The PCNs reported relationships with AHS as the joint venture governance partner that ranged from excellent to requiring significant improvement, with the majority reporting that their governance representatives changed too frequently and often were not at the right level within AHS to make decisions.
- The PCNs identified the need for greater transparency and role clarity from AH.
- Many sections of the PCN Policy Manual are out of date and do not reflect modern day operations. The PCNs are unclear as to why Alberta Health has not released updates to the PCN Policy Manual.

Given that PCNs are now ten years old, the pace of development of effective inter-disciplinary teams has been slow. While the number of family physicians has been increased in the PCNs, the physician panel size has exhibited limited growth or decrease, and the ratio of non-physician to physicians on the inter-disciplinary teams continues to be lower than evidence suggests as best practice.[71]

Acknowledgements

PCN staff were enthusiastic about their participation in this Review, and were cooperative and collaborative during the Review. Although Alberta Health sampled PCNs using a stratified randomized process, there were many PCNs that volunteered to be part of the Review. Alberta Health thanks PCN staff and governance members for their open and honest assessment. All PCNs that participated in this Review conveyed a dedicated commitment towards improving the primary health care system for all Albertans.

[71] Wranik, D. & Hanrahan, K. (2012). *The compensation and management of interdisciplinary primary health care teams in Alberta.* Edmonton, AB: Alberta Health.

10. Appendix A

Physician compensation

Fee-for-Service (FFS)

- The majority of family physicians who belong to a PCN are compensated through FFS.
- Insured services through the Alberta Health Care Insurance Plan that are provided by physicians and are medically necessary have a code and a fee associated to them in the Schedule of Medical Benefits (SOMB).
- Fee modifiers compensate physicians for complex patients, and for services that take longer than the allotted time.
- Physicians are compensated per insured service based on the associated code and any applicable modifiers.
- Codes and fees are reviewed annually and fee increases set out in the physician compensation agreement entered into between Alberta Health and the AMA. Fee increases are calculated in sectional allocations every year.
- In 2013/2014, 7,743 physicians were compensated through FFS.
- Overhead components of FFS billing are included in the health service codes found within the SOMB and the amount of overhead included in the fee varies greatly by physician specialty.
- Most health services codes (HSCs) within the SOMB do not separate professional and technical (overhead) components.
- AHS largely covers overhead costs for physician activities within AHS facilities.

Alternative Relationship Plans (ARPs)

- A minority of family physicians who belong to a PCN are compensated through an ARP arrangement.
- ARPs are physician funding and compensation programs in collaboration with AHS, the Universities of Alberta and Calgary, and the AMA.
- ARPs offer an alternative compensation mechanism from FFS to physicians who provide insured medical services, and their purpose is to provide incentive for innovation in clinical service.
- There are two types of ARP:
    - Academic ARPs total program funding arrangement with physicians who provide clinical services, teach, and conduct research at Alberta universities or medical facilities; central to the operations of the Faculties of Medicine.
    - Clinical ARPs provide compensation for a defined set of clinical services, as part of a specific service delivery model to a target population and help engage physicians to provide care to vulnerable and underserved populations
- In 2014/2015 Alberta Health spent approximately $440 million on ARPs.

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Clinical Stabilization Initiative (CSI)

In addition to these payment mechanisms, Alberta Health Alberta Health provides additional funding to physicians through its Clinical Stabilization Initiative (CSI) programs:

- Business Costs Program (BCP): The BCP was established in 2007 to address the rising costs faced by physicians to maintain a practice in the province.
- BCP base payment rates are applied to each eligible health service code as well as each associated modifier and call for services provided in an office or diagnostic facility as follows:
    - Calgary, Airdrie, De Winton: $3.41; and
    - All other communities $2.89.
- The Rural, Remote, Northern Program (RRNP): The RRNP was established effective September 1, 2007 to provide additional compensation to physicians providing insured services in rural, remote or northern communities within Alberta (602 total). The RRNP aims to recruit and retain physicians to RRNP-eligible communities.

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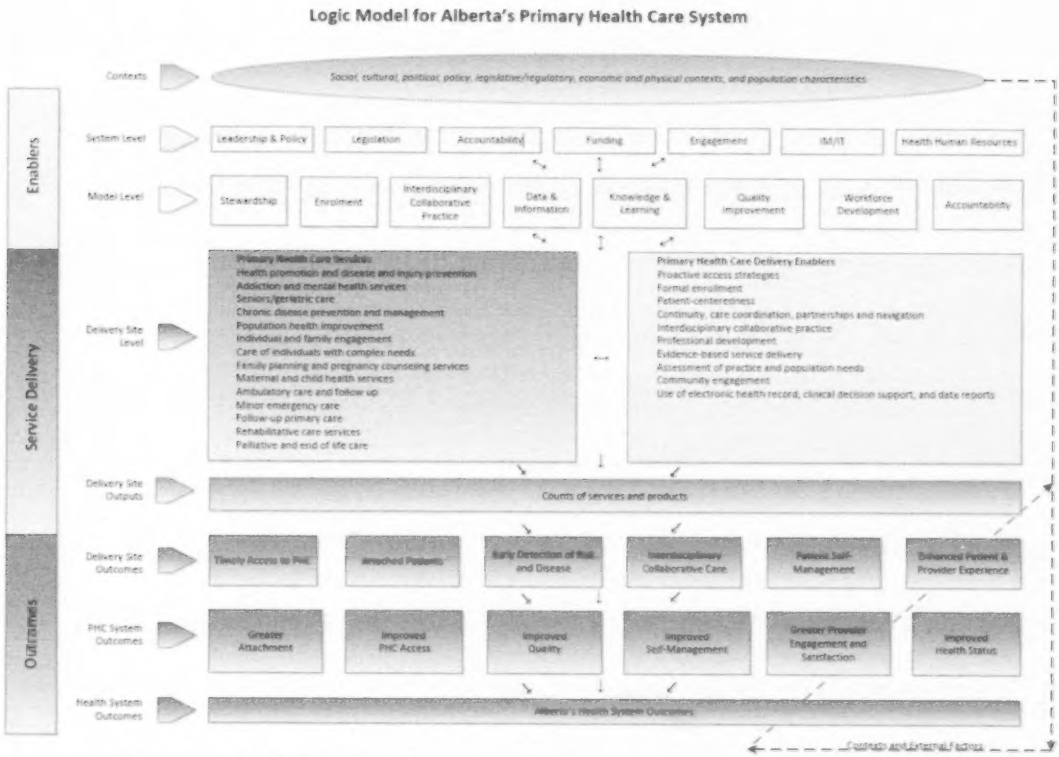
11. Appendix B

Logic Model for Alberta's Primary Health Care System



Primary Health Care Branch, Alberta Health November 14, 2013